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Contributions to the Botany of Vermont, VIII

FLORA OF VERMONT

A LIST OF THE

FERN ^{AND} SEED PLANTS

GROWING WITHOUT CULTIVATION.

PREPARED BY

EZRA BRAINERD, L. R. JONES and W. W. EGGLESTON

COMMITTEE FOR THE

VERMONT BOTANICAL CLUB.

EXTRACTED FROM THE TWENTIETH VERMONT
AGRICULTURAL REPORT

Distributed December 15, 1900

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CONTRIBUTIONS TO THE BOTANY OF VERMONT

- I. A LIST OF THE MOSSES OF VERMONT, with Analytical Keys to the Genera and Species, by A. J. Grout, March, 1898, 38 pages.
Price 15 cents.
- II. A PARTIAL LIST OF THE PARASITIC FUNGI OF VERMONT, by W. A. Orton, September, 1898, 24 pages.
Price 10 cents.
- III. A PRELIMINARY LIST OF THE HEPATICÆ OF VERMONT, by Clifton D. Howe, January, 1899, 10 pages.
Price 10 cents.
- IV. SUPPLEMENT TO A LIST OF THE MOSSES OF VERMONT, by A. J. Grout, January, 1899, 4 pages.
Price 5 cents.
- V. THE TREES OF VERMONT (Illustrated), by Anna M. Clark, with NOTES ON THE TREES OF BURLINGTON AND VICINITY, by L. R. Jones, December, 1899, 100 pages.
Price 25 cents.
- VI. GENERA OF BASIDIOMYCETES OF VERMONT, with References to scattered Literature for Determination of the Species, by Edward A. Burt, September, 1899, 18 pages.
Price 10 cents.
- VII. A SECOND PARTIAL LIST OF THE PARASITIC FUNGI OF VERMONT, by W. A. Orton, December, 1899, 34 pages.
Price 10 cents.
- VIII. THE FLORA OF VERMONT. A list of the Fern and Seed Plants Growing without Cultivation, by Ezra Brainerd, L. R. Jones and W. W. Eggleston, December, 1900, 123 pages.
Price 25 cents.

The above Contributions to the Botany of Vermont may be obtained as follows :

I-V and VII, Botanical Department, University of Vermont, Burlington Vermont.

VI, Librarian, Middlebury College, Middlebury, Vermont.

VIII, From either of the above addresses.

**MICROFILMED
AT HARVARD**

To
CYRUS G. PRINGLE, A. M.

For twenty-five years
a diligent and conscientious collector of the plants of North America ;
whose talent and enthusiasm were first shown in the study of the
FLORA OF VERMONT.

FLORA OF VERMONT

PREFACE

It is now twelve years since the last edition of Professor Perkins' *Flora of Vermont* was published. The supply of the Tenth Report of the State Board of Agriculture, which contained that publication, has for some time been exhausted so that it is increasingly difficult to secure copies of it. Moreover these twelve years have included a period of intense activity in systematic botany in the Eastern States, and they have witnessed considerable additions to the knowledge of Vermont plants. The Vermont Botanical Club was organized five years ago for the chief purpose of adding to and recording this knowledge. The present catalogue has been prepared by a committee acting for the Club, and it aims to set forth briefly the facts as at present known to Vermont botanists regarding the occurrence and distribution of the higher plants in the state. It is unnecessary to say that the list is provisional and incomplete. Students of the Vermont Flora will doubtless make yearly additions and corrections to this catalogue, until the time once more arrives when a new one will be necessary. The present list stands merely as a report of progress, and the most that is hoped is that it will prove a stimulus and aid to further advancement.

The list is intended to include the names of all of the seed and fern plants known to occur as native or apart from cultivation within the state. Much pains has been taken to verify doubtful specimens. Where no other authority is given for the determination of the species or its insertion in the list, the plants have been personally examined by this committee. In every case where a name is admitted to the main list there is an authenticated specimen deposited in one or more of the permanent herbaria of the state, or in such other herbarium as is indicated in the accompanying note. The invariable rule has been to admit no name which has not an extant specimen back of it. This has necessarily led to the exclusion of a number of names of plants reported by earlier botanists. In many of these cases the evidence is such as to leave little doubt that the plants actually occurred as reported, and probably many of them will be rediscovered. The names of such plants are included in a supplementary list at the end of the main catalogue, and each name so appearing should be considered as a challenge to the sagacity of present botanists until the plant is again

found. It has not been practicable, however, nor has it seemed important, that the committee examine specimens from all the localities cited in the list. Thus if the specimens from one locality have been verified and the species is therefore admitted to the list, other stations are often cited upon the authority of the collectors alone. But even in such cases, where there was any reason for questioning the identity of the plant, its inspection by recognized authorities has been secured. Stations cited on the sole authority of older published lists are in quotation marks.

These are busy times for the botanist who would keep informed in matters of nomenclature. The committee had some appreciation of this fact when undertaking its task, but this appreciation has increased during the progress of the work. The aim has been, in accordance with the wish of the Vermont Botanical Club, to follow a conservative policy in matters of nomenclature. In all cases, unless otherwise stated, the preferred name is that in accord with the usages of the Kew herbarium, which means in general the usage of the Gray Manual and the Synoptical Flora of North America. Where the name established by the rules of the Botanical Club of the American Association for the Advancement of Science, as expressed in the Britton-Brown Illustrated Flora, is at variance with this preferred name, it follows in parenthesis. All such synonymous names are included in the index.

In the sequence of families the order is that of Engler and Prantl as embodied in the Britton-Brown Illustrated Flora. This is accepted by botanists generally as representing more nearly the natural relationship of plants than does that of any of the older systems. It is believed that the temporary inconvenience caused by this change, to those who are more familiar with the older arrangements, will be more than counterbalanced by the advantages which will follow acquaintance with the present one.

The committee were in doubt as to whether it would not be wiser to adopt the Engler-Prantl family names. Such would be the consistent course and, doubtless, some will criticise the failure to follow it. Since it involved the breaking up of several of the familiar groups like Rosaceae, Leguminosae, etc., it was decided that the argument of present convenience to most members of the club outweighed that of consistency.

In indicating the degree of frequency of occurrence, four adjectives have been used with a careful attempt at precision, namely, "common," "frequent," "occasional," "rare." In each case this statement regarding frequency is to be associated with the accompanying statement regarding habitat,—thus "sandy soil, common" means common on sandy soils; and such a plant may be rare in other habitats. The term "rare" has been reserved for those plants which are known to occur in but few stations and there but sparingly. Where they are abundant in such stations the word "local" has been preferred. In cases where but four or five stations

or less were known, these have been enumerated. It is always a matter of justice to botanical explorers and of interest and stimulus to others to insert the name of the station and of the discoverer of a rare plant, and the aim of the committee has been to do this so far as compatible with the brevity required. The habitats given are based on observations made in Vermont. Where these differ from those given in the standard botanies it is believed that the statements of this list more accurately define the local conditions.

Small capitals are used in the Catalogue for the names of foreign plants or of those not indigenous to the northeastern United States, that is to the region covered by the Gray Manual. In this the familiar usage of Gray's botanies has been followed. The distinction is somewhat helpful, but since it does not indicate the native Vermont flora with the exactness desired, a Supplementary List has been prepared which includes the names of those plants which are natives of the northeastern United States, and therefore printed in full-face type in this catalogue but which are not natives of Vermont.

The committee desires to acknowledge the generous assistance in the work of many other members of the Vermont Botanical Club. Especial mention should be made of the contributions of Dr. A. J. Grout whose specimens and notes were placed in the hands of the committee and of Mr. Clifton D. Howe who made the final copy of the manuscript for the printers and helped to handle the proof.

Dr. B. L. Robinson and Mr. M. L. Fernald have examined many doubtful specimens and have advised throughout in matters of nomenclature. Professor F. Lamson-Scribner critically examined the Vermont specimens of several of the genera of Gramineæ and contributed notes which add much to the accuracy of their treatment. Dr. C. W. Swan also gave valuable advice in this group. Dr. M. A. Howe has contributed the results of his own explorations and has reported upon various plants in the herbarium of the New York Botanic gardens.

To these gentlemen for their courteous assistance and kindly interest, the Vermont Botanical Club is greatly indebted.

EZRA BRAINERD,
L. R. JONES,
W. W. EGGLESTON,

Committee.

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FLORA OF VERMONT

PTERIDOPHYTA. FERN PLANTS

OPHIOGLOSSACEAE. ADDER'S TONGUE FAMILY

BOTRYCHIUM

- B. lanceolatum**, Angstroem. Moist hollows in cool open woods ; rare.
- B. matricariaefolium**, Braun. Rich moist woods ; occasional. A reduced form also occurs (*B. tenebrosum*, A. A. Eaton.)
- B. simplex**, Hitchcock. Hilly pastures and open woods ; occasional.
- B. ternatum**, Swartz. var. **dissectum**, Milde. (*B. dissectum*, Spreng.) Cool loamy soil of open fields ; occasional.
- B. ternatum**, Swartz. var. **intermedium**, D. C. Eaton. (*B. obliquum*, Muhl. var. *intermedium*, Underw.) Old pastures and copses ; occasional.
- B. ternatum**, Swartz. var. **obliquum**, Milde. (*B. obliquum*, Muhl.) Moist gravelly slopes along the base of the mountains ; frequent.
- B. ternatum**, Swartz. var. **rutaeifolium**, D. C. Eaton. (*B. matricariæ*, Spreng.) Old fields ; rare.
- B. Virginianum**, Swartz. Rich woods ; common.

OPHIOGLOSSUM. ADDER'S TONGUE

- O. vulgatum**, L. Muck ; occasional.

FILICES. FERN FAMILY

ADIANTUM. MAIDENHAIR

- A. pedatum**, L. Rich moist woods ; common.

ASPIDIUM (DRYOPTERIS) SHIELD FERN

- A. acrostichoides**, Swartz. Christmas Fern. Rocky woods ; common and variable.
- A. acrostichoides**, Gray. var. **incisum**, Gray. Occasional.

- A. aculeatum*, Swartz. var. *Braunii*, Koch. (D. Braunii, Underw.) Smugler's Notch, Pursh, 1807, is the type station. Moist woods above 2,000 feet altitude; occasional.
- A. Bootii*, Tuckerman. Wet thickets and about ponds; occasional.
- A. cristatum*, Swartz. Moist thickets and swamps; frequent.
- A. cristatum*, Swartz. var. *Clintonianum*, Eaton. Swampy woods; frequent.
- A. fragrans*, Swartz. Mt. Mansfield, Bolton Notch and Camel's Hump, *Pringle*; Mt. Zion, (Hubbardton), *Ross* and *Eggleston*.
- A. Goldianum*, Hook. Rich moist woods; occasional.
- A. marginale*, Swartz. Rocky woods; common.
- A. Noveboracense*, Swartz. Moist woods and swamps; common.
- A. spinulosum*, Swartz. Damp woods; occasional.
- A. spinulosum*, Swartz. var. *dilatatum*, Hook. Mountain woods; common above 2,500 feet altitude.
- A. spinulosum*, Swartz. var. *intermedium*, D. C. Eaton. Woodlands; common.
- A. Thelypteris*, Swartz. Swamps and wet places; common.
- A. marginale* × *cristatum*, Davenport. Cold bog, Shrewsbury, *Eggleston*; Pittsford, *Miss M. Slosson*.

ASPLENIUM. SPLEENWORT

- A. angustifolium*, Michx. Rich moist woods; occasional.
- A. ebeneum*, Ait. (A. platyneuron, Oakes.) Rocky woods; frequent.
- A. ebenoides*, R. R. Scott. Rutland, *Ross*. One plant, now in Herb. Univ. Vt.
- A. Filix-foemina*, Bernh. Moist woods; common and variable.
- A. Ruta-muraria*, L. Limestone cliffs of western Vermont; occasional. L. Willoughby, *E. Faxon*, *F. A. Winslow*.
- A. thelypteroides*, Michx. (A. acrostichoides, Sw.) Rich woods; frequent.
- A. Trichomanes*, L. Shaded cliffs; frequent.
- A. Trichomanes*, L. var. *incisum*, Moore. Brattleboro, *Frost*, *Miss A. L. Grout*; Norwich, *Jesup*.
- A. viride*, Hudson. Cliffs, Mt. Mansfield and Camel's Hump, *Pringle*.

CAMPTOSORUS. WALKING FERN

- C. rhizophyllus*, Link. Shaded rocks, especially limestone; locally common in western Vermont.

CYSTOPTERIS

- C. bulbifera*, Bernh. Moist shaded ravines ; frequent.
C. fragilis, Bernh. Rocky woods and ravines ; common.

DICKSONIA

- D. pilosiuscula*, Willd. (*D. punctiloba*, Gray.) Hilly pastures ; common.

ONOCLEA

- O. sensibilis*, L. Sensitive Fern. Moist meadows and thickets ; common.
 The form *obtusilobata*, Charlotte, *Pringle*.
O. Struthiopteris, Hoffmann. Ostrich Fern. Rich alluvial soil ; common.

OSMUNDA.

- O. cinnamomea*, L. Cinnamon Fern. Wet woods and pastures ; common.
 The form *frondosa*, Charlotte, *Pringle* ; Randolph, *Bates*.
O. Claytoniana, L. Wet woods and pastures ; common.
O. regalis, L. Wet woods and swamps ; common.

PELLÆA

- P. atropurpurea*, Link. Limestone cliffs ; occasional in western Vermont,
 Lake Willoughby, *E. Faxon*.
P. gracilis, Hook. (*P. Stelleri*, Watt.) Moist limestone rocks ; occasional.

PHEGopteris. BEECH FERN

- P. Dryopteris*, Fee. Rocky woods ; common.
P. hexagonoptera, Fee. Rich woods ; occasional.
P. polypodioides, Fee. (*P. Phegopteris*, Underw.) Damp woods ; common.

POLYPODIUM. POLYPODY

- P. vulgare*, L. Rocks ; common.

PTERIS. BRACKEN

- P. aquilina*, L. Pastures and woodlands ; common.

WOODSIA

- W. glabella*, R. Br. "Willoughby Lake," *Torrey* ; Mt. Mansfield and
 Bakersfield, *Pringle* ; Quechee Gulf, *Balch*.
W. hyperborea, R. Br. (*W. alpina*, S. F. Gray.) Mt. Mansfield and
 Willoughby, *Pringle* ; Quechee Gulf, *Balch*.
W. ilvensis, R. Br. Rocks ; common.
W. obtusa, Torr. Rocky banks and ledges ; occasional.

WOODWARDIA. CHAIN FERN.

W. Virginica, Smith. Fort Ethan Allen pond, *Robbins*; Franklin bog, *Wild*.

EQUISETACEAE. HORSETAIL FAMILY

EQUISETUM. HORSETAIL

- E. arvense**, L. Moist gravelly or sandy banks; common.
- E. hiemale**, L. Moist gravelly banks; common.
- E. limosum**, L. (*E. fluviatile*, L.) Shallow water with muddy bottom; common.
- E. limosum**, L. var. *polystachyum*, Brueckner. Burlington, *Mrs. Flynn*.
- E. littorale**, Kuehlewein. Gravelly shores of Lake Champlain; rare.
- E. palustre**, L. Wet sandy shore of Lake Champlain, Burlington, *Grout* and *Jones*.
- E. scirpoides**, Michx. Moist cool woods; occasional.
- E. sylvaticum**, L. Moist shady places; common.
- E. variegatum**, Schleicher. Gravelly shores; occasional.

LYCOPODIACEAE. CLUB MOSS FAMILY

LYCOPODIUM. CLUB MOSS

- L. annotinum**, L. Cold woods; common.
- L. annotinum**, L. var. *pungens*, Spring. Summit Mt. Mansfield, *Pringle*.
- L. clavatum**, L. Dry woods; common.
- L. complanatum**, L. Woods and thickets; common.
- L. complanatum**, L. var. *Chamaecyparissus*, Milde. Newfane, *Howe* and *Lloyd*; Stowe, *Mrs. Strav.*
- L. inundatum**, L. Moist soil; occasional.
- L. inundatum**, L. var. *Bigelovii*, Tuckerm. Sunderland, *Grout*.
- L. lucidulum**, Michx. Cold damp woods; common.
- L. obscurum**, L. var. *dendroideum*, D. C. Eaton. Moist woods; common.
- L. sabinaefolium**, Willd. Cold, mountain woods, Rochester, *Eggleston*.
- L. Selago**, L. Summits of Mansfield and Camel's Hump, *Robbins*; Smugler's Notch, *Pringle*; Johnson, *Eggleston*.

SELAGINELLACEAE

ISOETES

- I. echinospora*, Durieu. var. *Braunii*, Engelm. Margins of ponds and streams; common.
- I. echinospora*, Durieu. var. *muricata*, Engelm. "Mouth of Pompanoosuc river, Norwich," *Jesup*.
- I. echinospora*, Durieu. var. *robusta*, Engelm. Miry borders of bogs, northern L. Champlain; occasional.
- I. lacustris*, L. "Brattleboro," *Frost*; Alburgh, *Eggleston*.

SELAGINELLA

- S. apus*, Spring. Moist shady places, Brattleboro, *Grout*.
- S. rupestris*, Spring. Dry exposed rocks; frequent

SPERMATOPHYTA. SEED PLANTS
GYMNOSPERMS

CONIFERAE. PINE FAMILY

ABIES. BALSAM FIR

- A. balsamea*, Miller. Cold, wet woods and swamps; common.

JUNIPERUS. JUNIPER

- J. communis*, L. var. *alpina*, Gaud. (*J. nana*. Willd.) Common Juniper. Dry sterile hills; frequent.
- J. Sabina*, L., var. *procumbens*, Pursh. "West Rutland," *Mrs. Carr*; Manchester, *Miss M. A. Day*.
- J. Virginiana*, L. Red Juniper. Dry, rocky hills. Frequent in the Champlain and lower Connecticut valleys.

LARIX. LARCH

- L. Americana*, Michx. Tamarack. Cold swamps; common.

PICEA. SPRUCE

- P. alba*, Link. (*P. Canadensis*, B. S. P.) White Spruce. Common in northeastern Vermont also on Providence Island.

- P. nigra**, Link. (P. Mariana, B. S. P.) Swamp or Black Spruce. Common in sphagnum swamps of the Champlain and upper Connecticut valley. The dwarf form, var. *semiprostrata*, occurs on the summit of Mt. Mansfield, *Eggleston*.
- P. rubra**, Link. (P. nigra, var. *rubra* Engelm.; P. *rubens*, Sarg.) Red Spruce. Common, especially on rocky mountain sides.

PINUS. PINE

- P. Banksiana**, Lambert. (P. *divaricata*, Sudw.) Jack Pine. Monkton, *Robinson*; Starksboro, *Pringle*; Fairfax, *Bates*. But few trees at each station.
- P. resinosa**, Ait. Red or Norway Pine. Dry rocky soil; frequent.
- P. rigida**, Mill. Pitch Pine. Barren sandy soil. Common in the northern Champlain valley, less frequent in the Connecticut valley.
- P. Strobus**, L. White Pine. Common, especially in the Champlain and Connecticut valleys.

TAXUS. YEW

- T. Canadensis**, Willd. (T. *minor*. Britton.) Ground Hemlock. Moist banks and hills; frequent.

THUYA. ARBOR VITÆ

- T. occidentalis**, L. Commonly but wrongly called White Cedar. Swamps and rocky banks; common.

TSUGA. HEMLOCK

- T. Canadensis**, Carr. Rocky woods and swamps; common.

ANGIOSPERMS. MONOCOTYLEDONS

TYPHACEAE. CAT-TAIL FAMILY

SPARGANIUM. BUR-REED

- S. androcladum**, Morong. (S. *simplex*, Huds., var. *androcladum*, Engelm.) Bogs and shallow water; common.
- S. androcladum**, var. *fluctuans*. Morong. (S. *simplex*, Huds. var. *fluitans*, Engelm.) Floating in ponds; occasional.
- S. eurycarpum**, Engelm. Borders of ponds and rivers; frequent in western Vermont.

- S. minimum**, Fries. Marshy borders of ponds; occasional.
- S. simplex**, Huds. Marshy borders of ponds and streams; frequent.
- S. simplex**, Huds., var. **angustifolium**, Engelm. Shallow water in mountain ponds; occasional.

TYPHA. CAT-TAIL

- T. angustifolia**, L. Along railroad, Charlotte, *Pringle*; Manchester, *Miss Day*.
- T. latifolia**, L. Marshes; common.

NAIADACEAE. POND-WEED FAMILY

NAIAS

- N. flexilis**, Rostk. & Schmidt. Slow streams and ponds; common.

POTAMOGETON. PONDWEED

- P. alpinus**, Balbis. (*P. rufescens*, Schrad.) Windsor, *Jesup*; Willoughby Lake, *E. Faxon*; Lewis Creek, Ferrisburgh, *E. & C. E. Faxon*; Harvey's pond, W. Barnet, *Blanchard*; Little Averill pond, *Eggleston*.
- P. amplifolius**, Tuckerm. Common. Fruiting more commonly at high altitudes.
- P. diversifolius**, Raf. (*P. hybridus*, Michx.) "South Hero," *Robbins*; "Brattleboro," *Frost*; Vernon, *Grout*; Willoughby, *Jesup*.
- P. Faxoni**, Morong. Abundant in the still water of Lake Champlain and in the creeks entering into it. No mature fruit has been collected.
- P. foliosus**, Raf. (*P. pauciflorus*, Pursh.) Lewis Creek, Ferrisburgh, *C. E. Faxon*; W. Barnet, *Blanchard*; Brattleboro, *Grout*; Ponds in Woodbury, *Brainerd*. Winooski R., Burlington, *Mrs. Flynn*.
- P. Fricatii**, Ruprecht. (*P. mucronatus*, Schrad.). Frequent.
- P. heterophyllus**, Schreb. Common.
- P. heterophyllus**, Schreb. var. **graminifolius**, Wats. & Coult. Knights' Island, L. Champlain, *Brainerd*.
- P. lonchites**, Tuckerm. (*P. fluitans*, Roth.) Usually in sluggish streams; frequent.
- P. lucens**, L. Common.
- P. lucens**, L. var. **Connecticutensis**, Robbins. Lake Dunmore, *E. Faxon*; Lake Bomoseen, *Eggleston*.
- P. natans**, L. Pools and ditches; common.

- P. Nuttalli*, Cham. (*P. Pennsylvanicus*, Cham.) Common.
- P. Oakesianus*, Robbins. Grout pond, Stratton; Lily pond, Vernon, *Grout*.
- P. obtusifolius*, Mertens & Koch. Fairlee Lake, *Jesup* and *Sargent*; Little Otter Creek, Ferrisburgh, *Grout* and *Eggleston*; Lewis Creek, *Faxon*.
- P. pectinatus*, L. Common.
- P. perfoliatus*, L. Common.
- P. perfoliatus*, L. var. *lanceolatus*, Robbins. Lake Champlain and tributaries; frequent.
- P. praelongus*, Wulf. In deep water; frequent.
- P. pusillus*, L. Common.
- P. Robbinsii*, Oakes. Common.
- P. Spirillus*, Tuckerm. Common.
- P. Tuckermani*, Robbins. Grout pond, Stratton, *Grout*.
- P. Vaseyi*, Robbins. Oozy pond, Barnet, *Blanchard*.
- P. Zizii*, Mertens & Koch. Alburg, *Morong*; Milton, *Grout*.
- P. zosteræfolius*, Schum. Common.

SCHEUCHZERIA

- S. palustris*, L. Peaty bogs; occasional.

ZANNICHELLIA

- Z. palustris*, L. Shallow water, S. Hero, *Robbins*; N. Hero, *Pringle*; Norwich, *Jesup*; Joe's Pond, (W. Danville,) *Blanchard*.

ALISMACEAE. WATER-PLANTAIN FAMILY

ALISMA. WATER-PLANTAIN

- A. Plantago-aquatica*, L. Swales; common.

SAGITTARIA. ARROW-LEAF

- S. arifolia*, Nutt. Swales and wet shores, Grand Isle county, *Brainerd*; Barnard Pond, *Jesup* and *Sargent*.
- S. graminea*, Michx. Low muddy shores of lakes and ponds; frequent.
- S. rigida*, Pursh. (*S. heterophylla*, Pursh.) Low muddy shores; frequent.
- S. latifolia*, Willd. (*S. variabilis*, Engelm.) Wet places; very common.
Many forms of this variable plant are recognized in the monograph of J. G. Smith, Sixth Report, Mo. Bot. Garden, 1895. Of these the forms c. and d. as well as the type are found in Vt.

HYDROCHARIDACEAE

ELODEA. (PHILOTRIA.)

E. Canadensis, Michx. Slow streams and ponds ; frequent.

VALLISNERIA. EEL-GRASS

V. spiralis, L. Quiet, shallow water ; common.

GRAMINEAE. GRASS FAMILY

AGROPYRON¹

A. caninoides, Beal. (*A. violaceum*, Lange in part.) Dry warm rocky woodlands and ledges ; frequent.

A. caninum, Beauv. Moist ledges, Burlington, Jones.

A. Novae-Angliae, sp. nov. (F. Lamson-Scribner ined. See remarks in footnote.) Cliffs of Lake Willoughby and Smuggler's Notch.

A. REPENS, Beauv. Quack-grass. Witch-grass. Fields ; common.

AGROSTIS

A. ALBA, L. Moist places ; common and extremely variable. Forms with more stoloniferous habit, *A. stolonifera* L., are frequent on wet banks and in lawns. A viviparous form occurs, Lake Willoughby, Jones.

A. ALBA, L. var. *VULGARIS*, Thurb. Red-top. Common in fields and roadsides. Variable and intergrading with the species. A small form occurs in cool pastures, sometimes having flowering glume awned ; Burlington and Lake Willoughby, Jones.

A. canina, L. var. *alpina*, Oakes. (*A. rubra*, L.) Summit of Mt. Mansfield and of Camel's Hump.

¹ There is some doubt at present as to what is the best interpretation of our Agropyrons. All available specimens have been submitted to Professor Scribner and the above disposition meets his approval. *A. caninum* is a European species and when found in eastern America is usually regarded as introduced. Apparently the Burlington plant was native. *A. caninoides* was founded upon western types, and the Vermont plants referred to this differ somewhat from the western plants. This disposition of them may therefore be regarded as a provisional one, not altogether satisfactory. Of the new species proposed Professor Scribner writes, Sept. 19, 1900, "In regard to the Agropyron for which I have proposed the name *Novae-Angliae*, I must think it quite distinct from the *A. tenerum* of the west, although it suggests that species somewhat in habit. It looks more like a caespitose form of *A. repens*. I believe it has been included under *A. violaceum* by some authors, but it certainly is distinct from that species, as represented in our herbarium, from northern Europe and from the Rocky Mountain region."

A. intermedia, Scribn. Shaded places, Waterbury, *Pringle*; Burlington, *Jones*.

A. perennans, Tuckerm. Moist shaded places; frequent.

A. scabra, Willd. (*A. hyemalis*, B. S. P.) Dry ditches and other desiccated places; common.

ALOPECURUS

A. geniculatus, L. (*A. geniculatus*, L. var. *aristulatus*, Torr.) Water Foxtail. Wet meadows; frequent.

A. PRATENSIS, L. Meadow Foxtail. Occasionally introduced in fields. "Bel-lows Falls," *Carey*; Hartland, *Ruggles*; Burlington, *Jones*.

AMMOPHILA

A. arundinacea, Host. (*A. arenaria*, Link.) Sandy shores of Lake Champlain, Alburgh, *Pringle*.

ANDROPOGON

A. provincialis, Lam. (*A. furcatus*, Muhl.) Dry rocky river banks; occasional.

A. nutans, L. var. *avenaceus*, Hack. (*Chrysopogon nutans*, Benth. C. *avenaceus*, Benth.) Dry sandy soil; occasional.

A. scoparius, Michx. Dry sterile soil; occasional.

ANTHOXANTHUM. SWEET VERNAL-GRASS

A. ODORATUM, L. Occasional in old meadows and roadsides.

ARISTIDA

A. dichotoma, Michx. Barren fields; "Pownal," *Robbins*; New Haven, *Pringle*.

A. gracilis, Ell. Dry pastures; Vernon, *Grout*.

ARRHENATHERUM. TALL OAT-GRASS

A. AVENACEUM, Beauv. (*A. elatius*, Beauv.) Charlotte, *Horsford*; Burlington, *Jones*.

ASPERELLA. (ASPRELLA. HYSTRIX)

A. Hystrix, Humb. (*Gymnostichum Hystrix*, Schreb.) Rocky woods; frequent.

AVENA

A. striata, Michx. Rocky woods; frequent.

BRACHYELYTRUM

B. erectum, Beauv. (*B. aristatum*, R. & S.) Moist shaded places; frequent.

BRIZA

- B. MEDIA**, L. Adventive in old meadow, Charlotte, *Pringle*.

BROMUS¹

- B. ciliatus**, L. Moist thickets; common.
B. ERECTUS, Huds. Adventive, Charlotte, *Pringle*.
B. Kalmii, Gray. Dry woodlands; occasional.
B. purgans, L. (*B. ciliatus*, L. var. *purgans*, Gray.) Thickets; common.
B. RACEMOSUS, L. Adventive, Charlotte, *Pringle*.
B. SECALINUS, L. Chess. Occasional in fields and waste places.
B. TECTORUM, L. Adventive, Charlotte, *Pringle*.

CALAMAGROSTIS²

- C. breviseta**, Scribn. (*C. Pickeringii*, Gray.) "Vermont," *Pringle*. Specimen in U. S. national herbarium.
C. breviseta, Scribn. var. *lacustris*, Kearney. (*C. Lapponica*, Gray in part.) Mt. Mansfield, *Pringle*. Specimen in U. S. national herbarium.
C. Canadensis, Beauv. Blue-joint. Marshes and wet places; common.
C. hyperborea, Lange. Lake Willoughby, *Boott*. Specimen in U. S. national herbarium.
C. hyperborea, Lange. var. *Americana*, Kearney. Lake Willoughby, *Mann*; Mt. Mansfield, *Pringle*.
C. inexpansa, Gray. (*C. confinis*, Gray.) Mt. Mansfield, *Pringle*; Lake Willoughby cliffs.
C. Langsdorfii, Trin. Mt. Mansfield, *Pringle*; Lake Willoughby, *Rusby*.

CENCHRUS

- C. tribuloides**, L. Sandy shores of Connecticut River, Brattleboro, *Grout*.

CHAETOCHELOA³ (SETARIA, IXOPHORUS)

- C. ITALICA**, Scribn. var. *GERMANICA*, Scribn. Hungarian-grass. Occasionally adventive, but not long persistent.

1. See Shear, C. L. Rev. N. A. Species Bromus. U. S. Dept. Agr. Div. Agros. Bul. 23, 1900.

2 See T. H. Kearney, Jr., A Revision of N. A. Species of Calamagrostis, U. S. Dept. Agr. Div. Agrost. Bul. 11, 1898. Kearney's nomenclature has been followed in this genus, although it is not entirely consistent with the system followed elsewhere in the present catalogue.

3 See Scribner and Merrill, N. A. Species of Chaetochloa, U. S. Dept. Agr. Div. Agrost. Bul. 21, 1900.

- C. GLAUCA**, Scribn. Yellow Foxtail. Fields ; common.
C. VERTICILLATA, Scribn. Old garden, Burlington, *Jones*.
C. VIRIDIS, Scribn. Green Foxtail. Fields and waste places ; common.

CINNA

- C. arundinacea**, L. Moist woods ; frequent.
C. pendula, Trin. (*C. latifolia*, Griseb.) Moist woods, especially on mountain sides ; frequent.

DACTYLIS

- D. GLOMERATA**, L. Orchard Grass. Common, preferring partial shade.

DANTHONIA

- D. compressa**, Aust. Dry banks and woods ; occasional.
D. spicata, Beauv. Dry sterile soil ; common.

DESCHAMPSIA

- D. atropurpurea**, Scheele. A single specimen collected on Mt. Mansfield by *Joseph Torrey*, probably before 1853, is in the University of Vermont herbarium. Later botanists have failed to rediscover it.
D. caespitosa, Beauv. Rocky banks and shores ; frequent.
D. flexuosa, Trin. Dry soil, ascending to highest mountain tops ; common.

EATONIA

- E. Dudleyi**, Vasey. (*E. nitida*, Nash.) Colchester, *Torrey*.
E. Pennsylvanica, Gray. Moist rocky woods and marshes ; frequent.

ELYMUS

- E. Canadensis**, L. Low thickets and river banks ; common.
E. Canadensis, L. var. *glaucifolius*, Gray. Dry banks ; occasional.
E. robustus, Scribn. and Sm. Burlington, *Jones*.
E. striatus, Willd. Middlebury, *James*, *Brainerd*; ledges of Winooski River, *Pringle*.
E. Virginicus, L. Moist thickets of river banks ; frequent.

ERAGROSTIS

- E. MAJOR**, Host. Burlington, Woodstock, *Jones*; Pownal, Bennington, *Eggleston*; railroad yard, Middlebury, *Brainerd*.
E. pectinacea, Steud. Dry sandy soil ; frequent in the lower Connecticut valley.

- E. Purshii**, Schrader. Sandy soil, especially along railroads ; occasional in southern Vt. ; Burlington, *H. L. Priest*.
E. reptans, Nees. (*E. hypnoides*, B. S. P.) Gravelly or sandy banks ; occasional.

FESTUCA

- F. ELATOR**, L. Meadow Fescue. Common in old meadows and along roadsides. Variable in size, but most of the Vermont plants are of the smaller form, *var. PRATENSIS*, Gray.
F. nutans, Willd. Rocky woods ; frequent.
F. ovina, L. Frequent as an introduced plant in lawns.
F. brachyphylla, Schultes. (*F. ovina*, L. *var. brevifolia*, Wats.) Cliffs of Smuggler's Notch ; rare, *Grout* and *Eggleston*.
F. rubra, L. Rocky shores and islands of Lake Champlain, occasional ; swamp, Stratton Mountain, *Jones*.

GLYCERIA. (PANICULARIA)

- G. Canadensis**, Trin. Wet places ; common.
G. elongata, Trin. Wet woods ; frequent, especially among the mountains.
G. fluitans, R. Br. Wet places or shallow water ; frequent. The Vermont specimens, so far as seen, are the form with smaller spikelets, viz. the *var. augustata*, Vasey, or *Panicularia borealis*, Nash. (See *Bul. Torr. Bot. Club*, 24: 348. 1897.)
G. grandis, Watson. (*P. Americana*, MacM.) Wet soil ; common.
G. nervata, Trin. Wet meadows ; common.
G. pallida, Trin. Shallow water or wet soil ; frequent.

GRAPHEPHORUM

- G. melicoideum**, Beauv. Banks of Winooski River, Colchester and Williston, *Pringle* ; South Burlington, *Jones*.

HIEROCHLOE. (SAVASTANA)

- H. alpina**, R. & S. Summit of Mt. Mansfield, *Tuckerman* and *Macrae*.
H. borealis, R. & S. (*S. odorata*, Scribn.) Moist meadows ; occasional.

HOLCUS

- H. LANATUS**, L. Fields, Charlotte, *Pringle* and *Horsford* ; Peacham, *Blanchard*.

HORDEUM

- H. jubatum**, L. Strafford, *Collins* ; probably introduced in grass seed.

LEERSIA. (HOMALOCENCHRUS)

- L. oryzoides**, Swartz. Wet places ; common.
L. Virginica, Willd. Wet woods ; frequent.

LOLIUM

- L. PERENNE**, L. Rye-grass. Adventive in roadsides and meadows ; occasional.

MILIUM

- M. effusum**, L. Cool moist woods, especially among the mountains ; frequent.

MUHLENBERGIA

- M. diffusa**, Schreber. Shaded places ; occasional.
M. glomerata, Trin. (*M. racemosa*, B. S. P.) Wet rocks and marshy places ; frequent and variable.
M. Mexicana, Trin. Moist meadows and banks ; common.
M. sylvatica, Torr. & Gray. Moist rocky banks ; occasional.
M. Willdenovii, Trin. (*M. tenuiflora*, B. S. P.) Rocky woods ; occasional.

ORYZOPSIS

- O. asperifolia**, Michx. Woods ; common.
O. Canadensis, Torr. (*O. juncea*, B. S. P.) Dry sand soil ; occasional.
O. melanocarpa, Muhl. Rocky woods ; frequent.

PANICUM

- P. agrostoides**, Muhl. Hartland, *Ruggles* ; Newfane, *Grout*.
P. capillare, L. Fields, common.
P. clandestinum, L. Moist thickets ; frequent.
P. CRUS-GALLI, L. Barn-yard Grass. Waste places ; common.
P. CRUS-GALLI var. **MUTICUM**, Vasey. With the type ; occasional.
P. depauperatum, Muhl. Dry woods and fields ; frequent.
P. GLABRUM, Gaudin. (*Syntherisma linearis*, Nash.) Sandy fields and waste places, lawns ; common.
P. linearifolium, Scribn. Monkton, *Pringle* ; Burlington, *Jones* ; Snake Mt., *Hazen*.
P. macrocarpon, Le Conte. (*P. latifolium*, of Gray Manual in part.) Woodlands ; frequent.
P. SANGUINALE, L. (*Syntherisma sanguinalis*, Nash.) Gardens and waste places ; common.
P. Scribnerianum, Nash. (*P. scoparium*, of Gray Manual) Brattleboro, *Grout*.
P. virgatum, L. Brattleboro, *M. A. Howe*.
P. xanthophyllum, Gray. Dry sandy soil ; frequent. The form **amplifolium**, Scribner, ined., Burlington, *Jones*.

Panicum dichotomum of Gray's Manual, etc., is at present conceived to include a number of closely related forms. The specific distinctions are not well established, however, and the nomenclature is in a confused state. All available Vermont specimens have been submitted to Professor Scribner and he recognizes among them the following species. There are numerous other forms, especially in the *pubescens* group which it is not possible as yet to name satisfactorily.

- P. Atlanticum*, Nash (?) Dry woods and sandy lake shore, Burlington, Jones, Hazen.
- P. boreale*, Nash. Woods and fields ; frequent.
- P. Columbianum*, Scribn. (*P. psammophilum*, Scribn.) Dry sandy soil ; frequent about Burlington.
- P. dichotomum*, L. Burlington, Jones ; Rutland, Eggleston.
- P. implicatum*, Scribn. Charlotte, Pringle.
- P. lanuginosum*, Ell. Hartland, Ruggles ; Middlebury, Wallingford, Brainerd.
- P. pubescens*, of recent authors (not Lamarck.) Leicester, Brainerd.
- P. sphaerocarpon*, Ell. Sterling Mt., Eggleston.
- P. tsugetorum*, Nash. Burlington, Jones.

PASPALUM

- P. setaceum*, Michx. Sandy fields ; "Bellows Falls," Carey ; Hartland, Ruggles ; Vernon, Grout.

PHALARIS

- P. arundinacea*, L. Reed Canary-grass. Wet soil or shallow water ; frequent.
- P. ARUNDINACEA*, L. var. *PICTA* (Hort.) Ribbon Grass. Common in gardens and occasionally adventive.
- P. CANARIENSIS*, L. Canary-grass. Waste places ; occasional and adventive.

PHLEUM

- P. PRATENSE*, L. Timothy. Fields ; common.

PHRAGMITES

- P. communis*, Trin. (*P. Phragmites*, Karst.) Swampy margins of ponds and lakes ; occasional.

POA

- P. alsodes*, Gray. Moist woods ; common.
- P. ANNUA*, L. Waysides and fields ; common.

- P. compressa*, L. English Blue-grass. Dry fields and woodlands ; common.
- P. debilis*, Torr. Dry rocky woodlands ; frequent.
- P. flava*, L. (*P. serotina*, Ehrh.) Fowl Meadow-grass. Wet soil ; common. The form known in Europe as *P. fertilis*, Reich. also occurs at Burlington, *Jones*, probably introduced.
- P. laxa*, Haenke. Summit of Mt. Mansfield, *Robbins*.
- P. nemoralis*, L. Rocky woodlands and mountain cliffs ; occasional and variable. A form, var. *strictior*, Gray, from the islands and headlands of Lake Champlain is of erect habit, and approaches *P. caesia*, Smith.
- P. pratensis*, L. Kentucky Blue-grass. Pastures and fields ; common.
- P. pratensis*, L. var. *angustifolia*, Smith. Groton Pond, *Bates* ; bog, Lake Willoughby, *Jones*.

SPARTINA

- S. cynosuroides*, Willd. "Bellows Falls," *Carey*. Shores of Lake Champlain and tributaries ; frequent.

SPOROBOLUS

- S. asper*, Kunth. Thompson's Point, *Pringle*.
- S. serotinus*, Gray. Wet soil ; Ripton, *Boyce* ; Bakersfield, *Pringle* ; Peacham, *Blanchard* ; frequent in elevated bogs of Windham county, *Grout*.
- S. vaginæflorus*, Wood. Dry soil ; occasional and variable. The commoner forms represent *S. neglectus*, Nash. Plants found at Burlington, *Jones*, correspond to *S. minor*, Vasey. Professor Scribner has examined these, however, and decides that all are included in *Wood's* species.

TRisetum

- T. subspicatum*, Beauv. (*T. subspicatum*, Beauv. var. *molle*, Gray.) Dry woods and ledges ; occasional.

ZIZANIA

- Z. aquatica*, L. Marshy borders of Lake Champlain and its tributaries ; occasional.

CYPERACEAE. SEDGE FAMILY

CAREX. SEDGE

- C. albicans*, Willd. Dry shady ledges; common in Western Vermont. For description see Bot. Gaz. 21: 7. 1896.
- C. alopecoidea*, Tuckerm. Wet meadows; Middlebury, *Brainerd*; Burlington, *T. E. Hazen*.
- C. aquatilis*, Wahl. Borders of ponds and rivers; occasional.
- C. arctata*, Boott. Moist woodlands; common.
- C. atrata*, L. var. *ovata*, Boott. (*C. atratiformis*, Britton.) Smugglers' Notch, *Pringle*.
- C. aurea*, Nutt. Moist meadows; common.
- C. Backii*, Boott. (*C. durifolia*, Bailey.) Shaded ledges; occasional.
- C. bromoides*, Schkuhr. Bogs and swamps; common.
- C. canescens*, L. Swamps; occasional.
- C. canescens*, L. var. *alpicola*, Wahl. (*C. brunnescens*, Poir.) Summits of Green Mountains.
- C. canescens*, var. *polystachya*, Boott. (*C. arcta*, Boott.) Low woods; Peacham, *Blanchard*; Knight's Island, *Brainerd*; Highgate Springs, *Jesup*.
- C. canescens*, L. var. *vulgaris*, Bailey. (*C. brunnescens*, Poir. var. *gracilior*, Britton.) Moist woodlands; common.
- C. castanea*, Wahl. Low meadows; local, e. g. Pomfret, Barnet, Middlebury.
- C. cephaloidea*, Dewey. Moist woodlands; Middlebury, *Burt*; Hartford, *Bates*.
- C. cephalophora*, Muhl. Fields and woods; common.
- C. chordorhiza*, Ehrh. Cold bogs; Bristol Pond, *Pringle*; "Eastern Vermont," *Congdon*; Perch Pond, *J. R. Churchill*; Colchester, *Jones*, *Groat*.
- C. communis*, Bailey. (*C. pedicellata*, Britton.) Dry hillsides; common.
- C. communis*, Bailey, var. *Wheeleri*, Bailey. Dry rocky woods; occasional.
- C. conoidea*, Schkuhr. Moist meadow; occasional.
- C. crinita*, Lam. Swales and along brooks; common.
- C. debilis*, Michx. var. *Rudgei*, Bailey. (*C. tenuis*, Rudge.) Frequent in moist sterile soil along the mountains.
- C. deflexa*, Hornem. Moist thicket, bordering Abby Pond, Ripton, *Brainerd*; Peacham, *Blanchard*.
- C. deflexa*, Hornem. var. *Deanei*, Bailey. Groton, *Pringle*.

- C. Deweyana*, Schwein. Dry woodlands; common.
- C. digitalis*, Willd. Dry open woods; frequent.
- C. eburnea*, Boott. (*C. setifolia*, Britton.) Frequent on dry shaded limestone.
- C. exilis*, Dewey. Peat bogs; Bristol, *Pringle*; Peacham, *Blanchard*.
- C. filiformis*, L. Peaty borders of ponds; frequent.
- C. filiformis*, L. var. *latifolia*, Boeckl. (*C. lanuginosa*, Michx.) Swales and low meadows; frequent.
- C. flava*, L. Low meadows; common.
- C. flava*, L. var. *graminis*, Bailey. Wet margins of springs and low borders of ponds; common.
- C. flava*, L. var. *viridula*, Bailey. (*C. viridula*, Michx.) Shores of lakes and rivers; Fairlee Lake, *Blanchard*; Pomfret, *Morgan*; White River, *Flint*.
- C. foenea*, Willd. Dry woods, often on rocks; rare.
- C. foenea*, Willd. var. *perplexa*, Bailey. Dry copses; Middlebury, *Brainerd*; Fairlee, *Blanchard*; Rutland, *Eggleston*.
- C. follicuiata*, L. Cold swamps; Stratton and Marlboro Ponds, *Grout*.
- C. formosa*, Dewey. Moist meadows; Sunderland, *Eggleston*; Middlebury, *Brainerd*.
- C. fusca*, All. Bogs; "Burlington," *Torrey*; Fairlee, *Jesup*; Mendon, *Eggleston*.
- C. gracillima*, Schwein. Low meadows; common.
- C. granularis*, Muhl. Moist meadows; common.
- C. granularis*, Muhl. var. *Haleana*, Porter. Burlington, *T. E. Hazen*.
- C. Grayii*, Carey. (*C. Asa-Grayi*, Bailey.) Swales, along rivers and lakes; rare.
- C. grisea*, Wahl. Along brooks in thickets; occasional.
- C. gynandra*, Schwein. Wet ground, especially in the mountains; frequent.
- C. Hitchcockiana*, Dewey. Rich woods; occasional.
- C. Houghtonii*, Torr. Dry sandy banks; Norwich, *E. A. Edmunds*; Rutland, *Eggleston*.
- C. hystricina*, Muhl. Wet meadows; common.
- C. interior*, Bailey. (*C. echinata*, var. *microstachys*, of Gray Manual in part.) Boggy meadows; common.
- C. intumescens*, Rudge. Wet woods and pastures; common.
- C. laxiculmis*, Schwein. Moist copses; occasional.
- C. laxiflora*, Lam. Moist meadows; occasional.

- C. laxiflora*, Lam. var. *latifolia*, Boott. (*C. Albursina*, Sheldon.) Moist rich woods ; frequent.
- C. laxiflora*, Lam. var. *patulifolia*, Carey. Rich woodlands ; frequent.
- C. laxiflora*, Lam. var. *striatula*, Carey. (var. *blanda*, Boott.) moist meadows ; common.
- C. laxiflora*, Lam. var. *varians*, Bailey. Copses and meadows ; common.
- C. lenticularis*, Michx. Sandy borders of ponds and lakes ; rare.
- C. leptalea*, Wahl. (*C. polytrichoides*, Muhl.) Wet woods and bogs ; frequent.
- C. limosa*, L. Bogs ; common.
- C. livida*, Willd. Bogs north of Bristol Pond, *Pringle*.
- C. longirostris*, Torr. Shady ledges ; frequent.
- C. lupulina*, Muhl. Swamps and ditches ; common.
- C. lupulina*, Muhl. var. *pedunculata*, Dewey. North Hero, *Brainerd* ; Newfane, *Grout*.
- C. lupulina*, Muhl. var. *polystachya*, Schwein and Torr. (*C. lupuliformis*, Sart.) Marshes along Lake Champlain.
- C. lurida*, Wahl. Wet meadows ; common.
- C. lurida*, Wahl. var. *gracilis*, Bailey. (*C. Baileyi*, Britton.) Bogs in the mountains ; frequent.
- C. lurida*, Wahl. var. *parvula*, Bailey. Occasional.
- C. Magellanica*, Lam. Cold bogs ; occasional.
- C. Michauxiana*, Boeckl. (*C. abacta*, Bailey.) Bogs and lake borders at high altitudes. Sterling Pond, *Pringle* ; frequent in the elevated bogs of Windham county, *Grout* ; Fifield Pond, Wallingford, *Eggleston* ; also at Lake of the Clouds, Mt. Mansfield, from seed sown there by Mr. Pringle.
- C. monile*, Tuckerm. Swales ; common.
- C. monile*, Tuckerm. var. *mcnstrosa*, Bailey. Occasional.
- C. Muhlenbergii*, Schkuhr. Dry sand, near Fort Ethan Allen, *Hazen*.
- C. Novae-Angliae*, Schwein. Shady knolls ; Stratton, *Grout* ; Chittenden, *Eggleston* ; Underhill and Cambridge, *Brainerd* ; also in an open sandy meadow near Brigham Academy, Bakersfield.
- C. oligocarpa*, Schuhr. Dry copses ; rare. Middlebury, *Brainerd*.
- C. oligosperma*, Michx. Bogs ; Peacham, *Blanchard* ; Stratton, *Grout* ; Sunderland, *Eggleston*.
- C. pallescens*, L. Low meadows ; common.
- C. pauciflora*, Lightf. Sphagnum bogs ; rare.
- C. pedunculata*, Muhl. Dry woods ; frequent.

- C. Pennsylvanica*, Lam. Shady hillsides ; common.
- C. plantaginea*, Lam. Rich woods ; frequent.
- C. platyphylla*, Carey. Shady banks ; common.
- C. prasina*, Wahl. Springy bogs in woods ; occasional.
- C. Pseudo-Cyperus*, L. Swamps ; Knight's Island, *Brainerd* ; Barnet, *Blanchard*.
- C. Pseudo-Cyperus*, L. var. *Americana*, Hochst. Swamps ; occasional.
- C. pubescens*, Muhl. Rich woods ; Barnet, *Blanchard* ; occasionally in Addison county, *Brainerd*.
- C. retrorsa*, Schwein. Swamps ; common.
- C. retrorsa*, Schwein. var. *Hartii*, Gray. (C. *Hartii*, Dewey.) marshes ; occasional.
- C. rigida*, Gooden. var. *Bigelovii*, Tuckerm. (C. *Bigelovii*, Torr.) Alpine summits of Green Mountains.
- C. rigida*, Gooden. var. *Goodenovii*, Bailey. (C. *Goodenovii*, J. Gay.) Wet meadows ; Peacham, *Blanchard*.
- C. riparia*, W. Curtis. Swales ; occasional.
- C. rosea*, Schkuhr. Rich woods ; common.
- C. rosea*, Schkuhr. var. *minor*, Boott. Willoughby Lake, *Wm. Boott*.
- C. rosea*, Schkuhr. var. *radiata*, Dewey. Shady knolls ; frequent.
- C. saltuensis*, Bailey. (C. *altocaulis*, Britton.) Deep swamps ; Sutton, *Pringle*.
- C. scabrata*, Schwein. Springy bogs in woods ; frequent.
- C. Schweinitzii*, Dewey. Swamps ; local. Pownal, *Dewey* ; Salisbury, *Brainerd* ; Manchester, *Miss Day*.
- C. scirpoidea*, Michx. Alpine cliffs, Willoughby Lake, Smuggler's Notch ; also Mt. Equinox, Manchester, *Miss Day*.
- C. scoparia*, Schkuhr. Moist meadows ; common.
- C. scoparia*, Schkuhr. var. *minor*, Boott. Rocky and sterile pastures.
- C. siccata*, Dewey. Sandy shore of Lake Champlain north of the Lake View Cemetery, Burlington.
- C. sparganioides*, Muhl. Rich woods ; frequent.
- C. squarrosa*, L. (C. *typhinioides*, Schwein.) Low borders of streams and lake margins in western Vermont ; occasional.
- C. sterilis*, Willd. (C. *echinata*, var. *microstachys*, Boeckl.) Wet meadows and pastures, especially in the mountains.

- C. sterilis*, Willd. var. *angustata*, Bailey. Mostly in shade at high altitudes.
- C. sterilis*, Willd. var. *excelsior*, Bailey. Wet margins of ponds and brooks.
- C. stipata*, Muhl. Swales; common.
- C. straminea*, Willd. Dryish copses and fields; common.
- C. straminea*, Willd. var. *brevior*, Dewey. (*C. festucacea*, Willd.) Gardner's Island, *Brainerd*.
- C. straminea*, Willd. var. *Crawei*, Boott. (*C. Bicknellii*, Britton.) Dry banks; occasional.
- C. straminea*, Willd. var. *mirabilis*, Tuckerm. Moist, shady places; occasional.
- C. stricta*, Lam. Swales and marshes; common.
- C. stricta*, Lam. var. *angustata*, Bailey. Manchester, *Miss Day*.
- C. stricta*, Lam. var. *curtissima*, Peck. Essex Junction, *Brainerd*.
- C. stricta*, Lam. var. *decora*, Bailey. (*C. Haydeni*, Dewey.) Barnet, *Blanchard*.
- C. tenella*, Schkuhr. Cold swamps; frequent.
- C. tenuiflora*, Wahl. Quaking bog, Bristol Pond, *Pringle*; Cedar swamp, Fair Haven, *Oakes*; Salem and Burlington, *Robbins*; Peacham, *Blanchard*.
- C. teretiuscula*, Gooden. Bogs; Bristol Pond, *Pringle*; Peacham, *Blanchard*.
- C. teretiuscula*, Gooden. var. *ramosa*, Boott. (*C. prairea*, Dewey.) Bristol Pond, *Brainerd*; Peacham, *Blanchard*; Rutland, *G. H. Ross*.
- C. torta*, Boott. Along mountain streams; frequent.
- C. tribuloides*, Wahl. Open swales; frequent.
- C. tribuloides*, Wahl. var. *Bebbii*, Bailey. Dry low grounds; common.
- C. tribuloides*, Wahl. var. *cristata*, Bailey. (*C. cristatella*, Britton.) Wet ground; frequent.
- C. tribuloides*, Wahl. var. *reducta*, Bailey. (var. *moniliformis*, Britton.) Moist copses; occasional.
- C. triceps*, Michx. var. *hirsuta*. Moist fields; occasional.
- C. trisperma*, Dewey. Cold bogs in shade; frequent.
- C. Tuckermani*, Dewey. Swales and marshes; frequent.
- C. umbellata*, Schkuhr. Rocky hills and dry knolls; frequent.
- C. umbellata*, Schkuhr. var. *vicina*, Dewey. In shade; occasional.
- C. utriculata*, Boott. Marshy borders of ponds; occasional.

- *C. utriculata*, Boott. var. *minor*, Boott. With the species.
- *C. virescens*, Muhl. Moist pastures ; occasional.
- *C. virescens*, Muhl. var. *costata*, Dewey. (*C. costellata*, Britton.) Moist copses ; Middlebury, *Brainerd*.
- *C. vulpinoidea*, Michx. Moist pastures ; common.
- *C. xanthocarpa*, Bicknell. Moist meadows ; common in Addison county *Brainerd*.
- *C. arctata* × *castanea*, Bailey. One plant, Middlebury, *Brainerd*.
- *C. lurida* × *lupulina*, Bailey. North Hero, *Morong*.
- *C. stricta* × *torta*, Fernald, n. hybr. "Culm tall, 7.5 dm. high, and strict as in *C. stricta* ; leaves linear, acute as in *C. torta*, much shorter and softer and with less attenuate tips than in *C. stricta* ; bracts elongated, overtopping the culm ; spikes erect, 1.5 to 6 cm. long, the pistillate loosely flowered ; scales ovate-lanceolate, acute, dull brown with green middle and narrow pale margin : perigynia ovate-lanceolate, thin, dull green, nerveless, the elongate, generally empty, tip exceeding the scale and sometimes recurved. Mt. Mansfield, Vt., July 3, 1896, (G. G. Kennedy). Very clearly combining the characters of the two parents. In the foliage and in most of the perigynia like *C. torta* ; but in its tall, stiff habit, and acute scales like *C. stricta*."—M. L. Fernald in letter.

CLADIUM

- *C. mariscoides*, Torr. Low borders of ponds ; occasional.

CYPERUS

- *C. aristatus*, Rottb. (*C. inflexus*, Muhl.) Wet sandy soil ; frequent.
- *C. dentatus*, Torr. Sandy shores ; Fairlee Lake, *Jesup* ; Lily Pond, Vernon, *Grout* ; Grand Isle, *Pringle*.
- *C. diandrus*, Torr. Low ground ; rare. Peacham, *Blanchard*. Wet sands of Connecticut River, Westminster, *Brainerd*.
- *C. diandrus*, Torr. var. *castaneus*, Torr. (*C. rivularis*, Kunth.) Wet soil ; common.
- *C. esculentus*, L. Alluvial soil ; occasional.
- *C. filiculmis*, Vahl. Dry sands ; common.
- *C. Houghtonii*, Torr. Fairlee Lake, *Jesup*.
- *C. strigosus*, L. Moist soil ; frequent.

DULICHIMUM

- *D. spathaceum*, Pers. Borders of ponds ; frequent.

ELEOCHARIS. SPIKE-RUSH

- E. acicularis*, R. Br. Pools and shores below high water mark ; common.
- E. diandra*, C. Wright, var. *depressa*, Fernald. Wet sands of Connecticut River, Westminster, *Brainerd*. See *Rhodora*, 2 : 60. 1900.
- E. intermedia*, Schultes. In mire or wet sands ; occasional.
- E. obtusa*, Schultes. (*E. ovata*, of recent manuals.) Muddy places ; common.
- E. obtusa*, Schultes. var. *jejuna*, Fernald. A dwarf form of drier ground ; frequent.
- E. olivacea*, Torr. Soft mire ; Bristol Pond, *Pringle* ; Abby Pond, Ripton and Lake Dunmore, *Brainerd*. Kenney Pond, Newfane, *Grout*.
- E. ovata*, R. Br. In soft black mire, inlet of Abby Pond, Ripton, *Brainerd* ; Spectacle Pond, Wallingford, *Eggleston*. Rare.
- E. ovata*, R. Br. var. *Heuseri*, Uechtritz. Dead mouth of inlet, Lake Dunmore, *Brainerd*. See *Rhodora* 1 : 137. 1899.
- E. palustris*, R. Br. Low borders of ponds ; occasional.
- E. palustris*, R. Br. var. *calva*, Gray. Stony clay, shores of Lake Champlain ; occasional.
- E. palustris*, R. Br. var. *glaucescens*, Gray. Moist grassy places ; common.
- E. palustris*, R. Br. var. *vigens*, Bailey. Low sandy shores of Lake Champlain ; frequent.
- E. pauciflora*, Link. (*Scirpus pauciflorus*, Lightf.) Wet soil, Lyndon, *Congdon* ; Willoughby Mt., *Tuckerman*.
- E. pygmaea*, Torr. Near Willoughby Lake, *Walter Deane*.
- E. tenuis*, Schultes. Wet meadows and lake borders ; common.

ERIOPHORUM COTTON-GRASS

- E. alpinum*, L. Cold bogs, especially in mountains ; common.
- E. gracile*, Koch. Bogs ; Middlebury, Ripton, *Brainerd* ; Ryegate, *Blanchard*.
- E. gracile*, Koch. var. *paucinervium*, Engelm. Bogs ; occasional.
- E. polystachyon*, L. Springy hollows and bogs ; common.
- E. vaginatum*, L. Peat bogs ; occasional.
- E. Virginicum*, L. Peat bogs ; frequent.

FIMBRISTYLIS

- F. autumnalis*, R. & G. Lily Pond, Vernon, *Grout*.
- F. capillaris*, Gray. (*Stenophyllus capillaris*, Britton.) Dry sands ; rare.

RHYNCHOSPORA. BEAKED-RUSH

- R. alba**, Vahl. Bogs ; frequent.
- R. capillacea**, Torr. Willoughby Mountain, *Jesup* ; Hartford, *Morgan*.
- R. fusca**, R. & S. Low grounds ; Thetford, *Blanchard* ; Wells River, *Horsford* ; Thetford Centre, *Jesup*.
- R. glomerata**, Vahl. Moist soil ; occasional.

SCIRPUS. BULRUSH, CLUB-RUSH

- S. atratus**, Fernald, (*Rhodora* 2 : 18. 1900). (*S. Peckii*, Britton, in part.)
Moist meadows and borders of bogs in the mountains ; occasional.
- S. atrovirens**, Muhl. Moist meadows ; common.
- S. atrocinctus**, Fernald. (See *Rhodora*, 2:17 and 1:137.) Wet meadows ; common, especially in the mountains.
- S. atrocinctus**, Fernald. var. **grandis**, Fernald. Ripton, *Brainerd*. (See *Rhodora* 2 : 17. 1900.)
- S. atrocinctus**, Fernald. var. **brachypodus**, Fernald. Bogs at high altitudes ; occasional.
- S. caespitosus**, L. Moist rocks of alpine summits ; local.
- S. cyperinus**, Kunth. (*Eriophorum cyperinum*, L.) Wool-grass. Wet meadows ; common.
- S. cyperinus**, Kunth. var. **Andrewsii**, Fernald. Middlebury, *Brainerd*.
- S. cyperinus**, Kunth. var. **condensatus**, Fernald. Middlebury and Ripton, *Brainerd*.
- S. debilis**, Pursh. Wet soil, Norwich, *Jesup* ; Westminster, *Brainerd*.
- S. fluviatilis**, Gray. Marshy borders of bays and streams, Lake Champlain ; occasional.
- S. lacustris**, L. In shallow water ; common.
- S. pedicellatus**, Fernald. (*Rhodora* 2:16. 1900.) Swales ; common.
- S. pedicellatus**, Fernald. var. **pullus**, Fernald. Swales and boggy margins of ponds ; frequent.
- S. planifolius**, Muhl. Mount Philo, Charlotte, *Pringle*.
- S. pungens**, Vahl. (*S. Americanus*, Pers.) Sandy borders of lakes ; frequent.
- S. rubrotinctus**, Fernald. (*S. microcarpus*, of Ill. Flora, Britton & Brown.)
Wet meadows ; common, especially in mountains.
- S. Smithii**, Gray. Keeler's Bay, Ferrisburgh, *E. Faxon* ; mouth of Winooski River, *Grout* and *Tracy*.

- S. subterminalis**, Torr. Grout Pond, Stratton, *Grout*; Lake Dunmore, *Brainerd*.
S. Torreyi, Olney. Muddy shores, Fort Cassin, Ferrisburgh, *Brainerd*; Barnet, *Blanchard*; ponds of Windham Co., *Grout*.

ARACEAE

ACORUS

- A. Calamus**, L. Sweet Flag. Marshes; common.

ARISÆMA

- A. Dracontium**, Schott. Low grounds. "Shoreham," *Robbins*; Weybridge, *Brainerd*.
A. triphyllum, Torr. Indian Turnip. Rich woods; common.

CALLA

- C. palustris**, L. Wild Calla. Bogs and marshes; frequent.

PELTANDRA

- P. undulata**, Raf. Shallow water. Colchester Pond, *Robbins*; Middlebury, *Brainerd*; Bristol Pond, *Pringle*; Lake Bomoseen marshes, *Eggleston*.

SYMPLOCARPUS. (SPATHYEMA)

- S. foetidus**, Salisb. Skunk Cabbage. Wet places; occasional. Common about Burlington.

LEMNACEAE

LEMNA. DUCKWEED

- L. minor**, L. North Hero, *Robbins*; Highgate, *Jesup*; Thetford, *Blanchard*; Burlington, *Jones*.
L. trisulca, L. Still water; frequent in marshes bordering Lake Champlain.

SPIRODELA

- S. polyrrhiza**, Schleid. Duckweed. Stagnant pools; common.

XYRIDACEAE

XYRIS

- X. Caroliniana**, Walt. Wet borders of ponds; "Brattleboro," *Frost*; Newfane, *Grout*.

ERIOCAULEAE**ERIOCAULON**

E. septangulare, Withering. Borders of ponds and lakes ; frequent.

PONTEDERIACEAE**HETERANTHERA**

H. graminea, Vahl. (*H. dubia*, MacM.) Ponds and streams ; frequent.

PONTEDERIA

P. cordata, L. Pickerel Weed. Borders of ponds and slow streams; frequent.

JUNCACEAE. RUSH FAMILY**JUNCUS. RUSH**

- J. alpinus**, Villars, var. **insignis**, Fries. (*J. Richardsonianus*, Schult.) Knight's Island, *Pringle*.
- J. articulatus**, L. Peacham, *Blanchard*; Joe's Pond, W. Danville, *Jones*; Manchester, *Miss Day*; Pownal, *Eggleston*.
- J. brachycephalus**, Buch. (*J. Canadensis*, J. Gay. var. *brachycephalus*, Engelm.) Moist sandy soil. New Haven and Woodbury, *Brainerd*; Quebec Gulf and Pownal. *Eggleston*.
- J. bufonius**, L. Low ground ; common.
- J. Canadensis**, J. Gay. Borders of ponds ; common.
- J. Canadensis**, J. Gay. var. **brevicaudatus**, Engelm. (*J. Canadensis*, J. Gay, var. *coarctatus*, Engelm.) Moist places in mountains ; common.
- J. effusus**, L. Moist meadows ; common.
- J. filiformis**, L. Sandy shores of northern Lake Champlain and on mountain summits ; occasional.
- J. Greenii**, Oakes and Tuckerm. Newfane, *M. A. Howe*.
- J. marginatus**, Rostk. Newfane, *M. A. Howe*.
- J. nodosus**, L. Wet meadows ; common.
- J. pelocarpus**, E. Meyer. Shores of ponds ; occasional.
- J. tenuis**, Willd. Fields ; common.
- J. trifidus**, L. Summit of Mt. Mansfield, *Robbins*; Camel's Hump, *Tuckerman* and *Macrae*.

LUZULA. (JUNCOIDES)

- L. campestris**, DC. Dry woods and fields ; frequent.
- L. spadicea**, DC., var. **melanocarpa**, Meyer. (*J. parviflorum*, Coville.) Wet places at high altitudes. Mt. Mansfield, *Robbins* ; Camel's Hump, *Tuckerman* and *Macrae* ; Killington, *Sargent* and *Eggleston* ; Pleiad Lake, Hancock, *Brainerd*.
- L. spicata**, Desvaux. Smuggler's Notch, *Pringle*. Nearly extinct.
- L. vernalis**, DC. Woods and banks ; frequent.

LILIACEAE. LILY FAMILY

ALLIUM. ONION

- A. fistulosum**, L. Welch Onion. Manchester, *Miss Day*.
- A. Schoenoprasum**, L. Chives. Moist rocky shores of Connecticut River. Windsor, *Leland* ; Hartland, *Eggleston*.
- A. tricoccum**, Ait. Wild Leek. Rich woods ; frequent.

ASPARAGUS

- A. officinalis**, L. Escaped from gardens ; occasional.

CLINTONIA

- C. borealis**, Raf. Cool moist woods ; common.

ERYTHRONIUM. DOG-TOOTH VIOLET

- E. Americanum**, Ker. Adder's Tongue. Rich copses and woodlands ; common.

HEMEROCALLIS. DAY LILY

- H. fulva**, L. Roadside escape from gardens ; occasional.

LILUM. LILY.

- L. Canadense**, L. Yellow Lily. Moist meadows ; common.
- L. Philadelphicum**, L. Red Lily. Sandy open woodlands ; common.
- L. tigrinum**, Ker. Tiger Lily. Roadside escape from gardens. Peacham, *Blanchard* ; Rutland, *Eggleston* ; Burlington, *Miss Brown*.

MAIANTHEMUM

- M. Canadense**, Desf. Woods ; common.

MEDEOLA

- M. Virginiana**, L. Indian Cucumber. Rich moist woods ; common.

OAKESIA. (UVULARIA)

- O. sessilifolia*, Watson. Moist woodlands ; common.

POLYGONATUM. SOLOMON'S SEAL

- P. biflorum*, Ell. Wooded hillsides ; common.
- P. giganteum*, Dietrich. (*P. commutatum*, Dietr.) Meadows and river banks. "Hartford," *Ward*; Manchester and Vernon, *Grout*; Fairlee, *Jesup* and *Sargent*; Pownal, *Eggleston* and *Andrews*.

SMILACINA. (VAGNERA) FALSE SOLOMON'S SEAL

- S. racemosa*, Desf. Moist copses ; common.
- S. stellata*, Desf. Moist banks and meadows ; frequent.
- S. trifolia*, Desf. Cold sphagnum swamps ; occasional.

SMILAX. GREEN-BRIER

- S. herbacea*, L. River banks and moist thickets ; frequent.

STREPTOPUS. TWISTED STALK

- S. amplexifolius*, DC. Wet mountain woods ; frequent.
- S. roseus*, Michx. Cold damp woods ; common.

TOFIELDIA

- T. glutinosa*, Willd. [Quechee Gulf, *Leland*. [Sumner's Falls, Plainfield, N. H., *Sargent*.]

TRILLIUM. WAKE-ROBIN

- T. cernuum*, L. Nodding Trillium. Moist woods ; occasional.
- T. erectum*, L. Purple Trillium. Rich woods ; common.
- T. grandiflorum*, Salisb. White Trillium. Rich moist woods of western Vermont ; common in the Champlain valley. Not known east of the Green Mountains.
- T. undulatum*, Willd. (*T. erythrocarpum*, Michx.) Painted Trillium. Cool moist woods ; frequent.

UVULARIA. BELLWORT

- U. grandiflora*, Smith. Rich woods ; common.
- U. perfoliata*, L. West Rutland, rare, Pownal, abundant, *Eggleston*.

VERATRUM. FALSE HELLEBORE

- V. viride*, Ait. Indian Poke. Wet meadows and swamps ; common.

ZYGADENUS

Z. elegans, Pursh. Bluffs of Lake Champlain, Ferrisburgh, *Brainerd*.

IRIDACEAE. IRIS FAMILY

IRIS

I. versicolor, L. Blue Flag. Wet meadows ; common.

SISYRINCHIUM. BLUE-EYED GRASS

S. angustifolium, Mill. Moist meadows ; common.

S. Atlanticum, Bicknell. Stratton, above 2000 feet, *Grout*.

ORCHIDACEAE. ORCHID FAMILY

APLECTRUM

A. hiemale, Nutt. (*A. spicatum*, B. S. P.) Rich woods ; occasional.

ARETHUSA

A. bulbosa, L. Sphagnum bogs ; occasional.

CALOPOGON. (LIMODORUM)

C. pulchellus, R. Br. (*L. tuberosum*, L.) Bogs ; occasional.

CALYPSO

C. borealis, Salisb. (*C. bulbosa*, Oakes.) Cold cedar swamps of the northern counties ; rare.

CORALLORHIZA. CORAL-ROOT

C. innata, R. Br. (*C. Corallorhiza*, Karst.) Swamps and damp woods ; frequent.

C. multiflora, Nutt. Dry woods ; occasional.

C. odontorhiza, Nutt. "Bellows Falls," *Carey* ; Pease Mountain, *Pringle* ; Pownal, *Eggleston*.

CYPRIPEDIUM. LADY'S-SLIPPER. MOCCASIN-FLOWER

C. acaule, Ait. Stemless Lady's-slipper. Woods and swamps ; frequent.

C. arietinum, R. Br. Ramshead. Rocky woods and swamps ; local and rare.

C. parviflorum, Salisb. Smaller Yellow Lady's-slipper. Bogs and low woods ; frequent.

C. pubescens, Willd. (*C. hirsutum*, Mill.) Larger Yellow Lady's-slipper. Rich moist woods ; frequent.

- C. spectabile*, Salisb. (*C. reginae*, Walt.) Showy Lady's-slipper. Cold swamps; occasional.

GOODYERA. (PERAMIUM.) RATTLE-SNAKE PLANTAIN

- G. pubescens*, R. Br. Dry woods at low altitudes; occasional.
G. repens, R. Br. Hemlock woods, Abby Pond, Ripton, *Brainerd*.
G. repens, R. Br. var. *ophioides*, Fernald. Cold mossy spruce woods; frequent.
G. tessellata, Lodd. See *Rhodora* I: 6. 1899. Cold moist woods at high altitudes; occasional.

HABENARIA

- H. blephariglottis*, Torr. White Fringed Orchid. Bogs. "N. Troy," *Carey*; Smuggler's Notch, *Eggleston*; Burlington, *Torrey*; Johnson, *Grout*.
H. bracteata, R. Br. Damp woods and meadows; frequent.
H. dilatata, Gray. Cold bogs; frequent.
H. fimbriata, R. Br. (*H. grandiflora*, Torr.) Purple Fringed Orchid. Cool mountain woods and meadows; occasional. A form with white, fragrant flowers, Nebraska Notch, Underhill, *Eggleston*.
H. Hookeriana, A. Gray. (*H. Hookeri*, Torr.) Dry woods; occasional.
H. hyperborea, R. Br. Bogs and cold woods; frequent.
H. lacera, R. Br. Ragged Fringed Orchid. Moist ground. Rutland, Hubbardton, Pownal, *Eggleston*; Ferrisburgh, *E. Faxon*.
H. obtusata, Richardson. Cold mountain woods; occasional.
H. orbiculata, Torr. Cold rich woods; frequent.
H. psycodes, Gray. Purple Fringed Orchid. Wet meadows and bogs; frequent.
H. tridentata, Hook. (*H. clavellata*, Spring.) Bogs and wet borders of ponds; occasional.
H. virescens, Spreng. (*H. flava*, A. Gray.) Moist soil; local.

LIPARIS. TWAY-BLADE

- L. liliifolia*, Richard. Swamps. "Bellows Falls," *Carey*; "Windsor," *Leland*; Middlebury, *Brainerd*.
L. Loeselii, Richard. Moist banks; frequent.

LISTERA. TWAY-BLADE

- L. convallarioides*, Nutt. Cold mountain bogs and brooksides; rare.
L. cordata, R. Br. Sphagnum bogs and mossy mountain woods; frequent.

MICROSTYLIS. (ACHROANTHES)

M. monophyllos, Lindl. Swamps; rare.

M. ophioglossoides, Nutt. (*A. unifolia*, Raf.) Open woods; occasional.

ORCHIS

O. rotundifolia, Pursh. Cold cedar swamps. Monkton and Bristol, *Pringle*.

O. spectabilis, L. Showy Orchis. Rich, moist woods at lower altitudes; common.

POGONIA

P. ophioglossoides, Nutt. Bogs; frequent.

P. pendula, Lindl. (*P. trianthophora*, B. S. P.) Dry woodlands. Fair Haven, *Chandler* (Specimen in herbarium Bost. Soc. Nat. Hist.); Newfane, *Howe* and *Grout*; Westminster, *Blanchard*.

P. verticillata, Nutt. Colchester, *Robbins*, *Torrey*; Pownal, *Andrews*. (Specimen in Williams College herbarium)

SPIRANTHES. (GYRSTACHYS.) LADIES' TRESSES

S. cernua, Richard. Wet soil; common.

S. gracilis, Bigelow. Sandy woods and plains; occasional,

S. latifolia, Torr. (*G. plantaginea*, Britton.) Wet gravelly shores; occasional.

S. Romanzoffiana, Cham. Bogs and cold moist soil; occasional.

DICOTYLEDONS.

JUGLANDACEAE. WALNUT FAMILY

CARYA. (HICORIA)

C. alba, Nutt. (*H. ovata*, Britton.) Shellbark Hickory. Rich soil; frequent west of the Green Mountains; less so in the southern Connecticut valley and its tributaries.

C. amara, Nutt. (*H. minima*, Britton.) Bitternut Hickory. Moist soil; frequent, with range about as the preceding.

C. porcina, Nutt. (*H. glabra*, Britton.) Pignut. W. Castleton, Pownal, *Eggleston*. Marsh Hill, Ferrisburgh, *Brainerd*.

JUGLANS

J. cinerea, L. Butternut. Rocky hillsides; frequent.

MYRICACEAE

MYRICA.

- M. asplenifolia*, Endl. (*Comptonia peregrina*, Coulter.) Sweet Fern. Dry sterile soil ; common.
- M. Gale*, L. Sweet Gale. Swamps and borders of ponds ; frequent.

SALICACEAE. WILLOW FAMILY

POPULUS. POPLAR

- P. ALBA*, L. White Poplar. Frequently spreading from the roots or escaped from cultivation.
- P. balsamifera*, L. Balm of Gilead. Balsam Poplar. Borders of streams and swamps ; frequent.
- P. DILATATA*, Ait. Lombardy Poplar. Frequent in cultivation and spreading from the root. Only staminate trees occur.
- P. deltoides*, Marsh. (*P. monilifera*, Ait.) Cottonwood. Borders of streams and lakes ; frequent in western Vermont and in the Connecticut valley as far north as Brattleboro.
- P. grandidentata*, Michx. Large-tooth Aspen. Rich woods ; frequent.
- P. tremuloides*, Michx. American Aspen. Woods ; common.

SALIX. WILLOW

- S. ALBA*, L. var. *VITELLINA*, Koch. White Willow. Frequent in cultivation and as an escape by banks of streams.
- S. balsamifera*, Barratt. Mt. Mansfield, *Pringle* ; Long Pond, Westmore, *E. Faxon* ; Elnore Mountain, *Grout*.
- S. candida*, Willd. Cold bogs ; rare.
- S. cordata*, Muhl. Low wet soil ; common.
- S. discolor*, Muhl. Wet soil ; common.
- S. discolor*, Muhl. var. *princoides*, Anders. Johnson, *Grout*.
- S. flaviatilis*, Nutt. (*S. longifolia*, Muhl.) Shores of Lake Champlain and of the Connecticut River ; rare.
- S. FRAGILIS*, L. Crack Willow. Common in cultivation and as an escape by streams and ponds.
- S. humilis*, Marsh. Sandy barrens ; frequent.
- S. lucida*, Muhl. Shining Willow. Moist banks ; frequent.
- S. myrtilloides*, L. Peat bogs. Burlington, *Robbins* ; Bristol Bog, *Pringle* ; Rutland, *Ross*.

- S. nigra**, Marsh. Black Willow. Banks of streams and ponds ; common.
- S. nigra**, Marsh. var. *falcata*, Torr. Frequent, with the species.
- S. petiolaris**, Smith. Swamps and shores of Lake Champlain ; occasional.
- S. phylicifolia**, L. Lake of the Clouds, Mt. Mansfield, *Pringle*. Two forms occur here, the one broad leaved, the other narrow leaved ; the latter may be distinct.
- S. PURPUREA**, L. Formerly cultivated for basket rods, now occasional as an escape by water sides.
- S. rostrata**, Richardson. (S. *Bebbiana*, Sargent.) Borders of thickets ; common.
- S. sericea**, Marsh. In swamps and along streams ; occasional.
- S. Uva-ursi**, Pursh. Summit of Mt. Mansfield, *Robbins*.
- S. discolor** × *humilis*, Bebb. Johnson, *Grout*.
- S. FRAGILIS** × *ALBA*, Bebb. Johnson, *Grout*.
- S. sericea** × *cordata*, Bebb. Johnson, *Grout*.

CUPULIFERAE. OAK FAMILY

ALNUS. ALDER

- A. incana**, Willd. Borders of streams ; common.
- A. serrulata**, Willd. (A. *rugosa*, Koch.) Moist soil ; frequent.
- A. viridis**, DC. (A. *Alnobetula*, Koch.) Higher mountain summits ; common ; rocky shores Connecticut River, occasional. Burlington Bay, *Mrs. Flynn*.
- A. serrulata** × *incana*. Burlington Bay, *Jones* and *Eggleston*.

BETULA. BIRCH

- B. lenta**, L. Sweet or Black Birch. Rich woodlands ; frequent in western Vermont and in the southern Connecticut valley.
- B. lutea**, Michx. f. Yellow Birch. Rich cool soils ; frequent, especially on mountain sides.
- B. papyrifera**, Marshall. Paper or Canoe Birch. Common.
- B. papyrifera**, Marshall. var. *minor*, Tuckerman. Summit Mt. Mansfield, *Eggleston*.
- B. populifolia**, Ait. White Birch. Frequent in the Champlain valley, less so in southern Vermont.

CARPINUS

- C. Caroliniana**, Walter. Blue Beech. Near streams ; common.

CASTANEA

- C. sativa*, Mill., var. *Americana*, Watson. (*C. dentata*, Borkh.) Chestnut. Frequent in the lower Connecticut valley and in southwestern Vermont ; a few trees at Burlington.

CORYLUS. HAZELNUT

- C. Americana*, Walt. Thickets ; frequent.
C. rostrata, Ait. Dry thickets ; common.

FAGUS

- F. ferruginea*, Ait. (*F. Americana*, Sweet.) Beech. Common.

OSTRYA

- O. Virginica*, Willd. (*O. Virginiana*, Willd.) Hop Hornbeam. Common.

QUERCUS. OAK

- Q. alba*, L. White Oak. Common west of the Green Mountains, less so in the southern Connecticut valley.
- Q. bicolor*, Willd. (*Q. platanoides*, Sudw.) Swamp White Oak. Low moist soil ; frequent in the Champlain valley, especially near the lake.
- Q. velutina*, Lam. (*Q. cocinea*, Wang. var. *tinctoria*, Gray.) Yellow Oak. Dry light soil ; frequent in western Vermont and in the southern Connecticut valley.
- Q. ilicifolia*, Wang. (*Q. nana*, Sargent.) Dry sandy soil. "Bellows Falls," *Carey* ; Brattleboro, *Grout*.
- Q. macrocarpa*, Michx. Bur Oak. Rich soil ; occasional in the Champlain valley, more common in Addison county.
- Q. Muhlenbergii*, Engelm. (*Q. acuminata*, Sargent.) Gardiner's Island, Ferrisburgh, *Pringle*.
- Q. prinoides*, Willd. Dry hillsides. "Pownal," *Robbins* ; North Pownal, *Eggleston* ; Snake Mountain, *Brainerd*.
- Q. Prinus*, L. Chestnut Oak. Dry rocky hillsides of western Vermont ; frequent from Charlotte, *Pringle*, through Addison county, *Brainerd*, and Rutland to Pownal, *Eggleston*.
- Q. rubra*, L. Red Oak. Common.
- Q. macrocarpa* × *alba*. Charlotte, *Pringle*.
- Q. Prinus* × *alba*. Monkton, *Pringle*.

URTICACEAE. NETTLE FAMILY

BÆHMERIA

B. cylindrica, Willd. Moist shady ground ; common.

CANNABIS

C. SATIVA, L. Hemp. Waste places ; occasional.

CELTIS

C. occidentalis, L. Hackberry. River banks and intervals. Burlington, *Robbins, Collins* ; Highgate Springs and Norwich, *Jesup* ; Monkton, *Horsford* ; New Haven and Cornwall, *Brainerd* ; Windsor, *Eggleston*.

HUMULUS

H. Lupulus, L. Hop. Occasional by waysides as an escape from cultivation.

LAPORTEA

L. Canadensis, Gaudichaud. (*Utricastrum divaricatum*, Kuntze.) Moist rich woods ; common.

MORUS

M. ALBA, L. White Mulberry. Often planted and occasionally escaped. Middlebury, *Brainerd* ; Burlington, *Mrs. Flynn*.

M. rubra, L. Red Mulberry. Rich woods. Pownal, *Oakes* ; North Pownal, *Eggleston*.

PARIETARIA

P. Pennsylvanica, Muhl. Rocky banks and cliffs ; occasional in western Vermont.

PILEA. (ADICEA)

P. pumila, Gray. Cool moist woods ; common.

ULMUS

U. Americana, L. American or White Elm. Moist soil ; common.

U. fulva, Michx. Slippery Elm. Rich rocky woods ; frequent.

U. racemosa, Thomas. Cork Elm. Limestone soils, western Vermont ; rare.

URTICA

U. gracilis, Ait. Fence rows and moist ground ; common.

U. URENS, L. Waste places. Barnet, *Blanchard* ; Royalton, *Ward*.

LORANTHACEAE

ARCEUTHOBium. (RAZouMOFSKYA)

- A. pusillum*, Peck. Dwarf Mistletoe. Occasional as a parasite on spruces and tamarack. *Rhodora* 2: 1. Jan. 1900.

SANTALACEAE

COMANDRA

- C. livida*, Richardson. Summit of Mt. Mansfield under stunted balsams, *Fringle*.
C. umbellata, Nutt. Dry thickets; frequent.

ARISTOLOCHACEAE

ASARUM

- A. Canadense*, L. Wild Ginger. Rich rocky woods; common.

POLYGONACEAE. BUCKWHEAT FAMILY

FAGOPYRUM

- F. ESCULENTUM*, Moench. (*F. Fagopyrum*, Karst.) Buckwheat. Persisting from cultivation.
F. TATARICUM, Gaertn. Indian Wheat. Persisting in cultivated fields.

POLYGONUM

- P. acre*, HBK. var. *leptostachyum*, Meisn. Water Smartweed. Wet meadows; occasional.
P. amphibium, L. Margins of ponds and slow streams; occasional.
P. arifolium, L. Low grounds; frequent.
P. aviculare, L. Knotgrass. Common in door yards and roadsides. A broad leaved form is *P. littorale*, Link.
P. Carey, Olney. Brattleboro, *Frost*; Newfane and Brattleboro, *Grout*.
P. cilinode, Michx. Rocky coves; frequent.
P. Convolvulus, L. Tilled fields; common.
P. Douglassii, Greene. Dry soils; occasional in Champlain valley.
P. dumetorum, L. var. *scandens*, Gray. (*P. scandens*, L.) Moist thickets; frequent.

- P. erectum*, L. Rutland, Bennington, Pownal, *Eggleston*; Middlebury, *Brainerd*; Burlington, *Mrs. Flynn*.
- P. Hartwrightii*, Gray. Marshes; occasional.
- P. Hydropiper*, L. Smartweed. Moist places; common.
- P. hydropiperoides*, Michx. Wet places and shallow water; occasional.
- P. lapathifolium*, L. var. *incarnatum*, Watson. (*P. incarnatum*, Ell.) Alluvial fields; frequent in the Champlain valley.
- P. Muhlenbergii*, Watson. (*P. emersum*, Britton.) Muddy or dry places; frequent.
- P. ORIENTALE*, L. Prince's Feather. Persisting about gardens.
- P. Pennsylvanicum*, L. Moist soil; common.
- P. PERSICARIA*, L. Lady's Thumb. Waste places; a common weed.
- P. ramosissimum*, Michx. Frequent about dwellings.
- P. sagittatum*, L. Tear-thumb. Low ground; common.
- P. Virginianum*, L. Moist thickets; occasional.
- P. viviparum*, L. Mt. Mansfield, *Pringle*.

RUMEX. Dock

- R. ACETOSA*, L. Charlotte, *Pringle*; Burlington, *Jones*.
- R. ACETOSELLA*, L. Sheep Sorrel. Fields; common.
- R. Britannica*, L. Wet places; frequent.
- R. CRISPUS*, L. Curled Dock. Fields and waste places; common.
- R. OBTUSIFOLIUS*, L. Bitter Dock. Fields and waste places; common.
- R. PATIENTIA*, L. Occasional; apparently becoming more common.
- R. verticillatus*, L. Swamps; common in the western counties.

CHENOPODIACEAE. GOOSEFOOT FAMILY

ATRIplex

- A. patulum*, L. Waste places, especially along railways; naturalized; occasional.

CHENOPODIUM. Pigweed

- C. ALBUM*, L. Pigweed. Fields; common.
- C. AMBROSIOIDES*, L. Adventive. Charlotte, *Pringle*.
- C. BOTRYS*, L. Waste places; becoming common.
- C. capitatum*, Watson. (*Blitum capitatum*, L.) Dry rich ground; apparently indigenous in places, occasionally introduced.

- C. GLAUCUM**, L. Railroad yards, Burlington, Bennington and Ferrisburgh.
C. hybridum, L. Shady ledges and waste places ; frequent.
C. URBICUM, L. Lumber yards. Burlington, *Howe*.

KUCHIA

- K. SCOPARIA**, Schrad. Adventive in Pringle's door yard, East Charlotte.

AMARANTACEAE

ACNIDA

- A. tuberculata**, Moq. var. *subnuda*, Watson. (*A. tamariscina* var. *tuberculata*, Uline and Bray.) Shady banks of slow streams or bays, Champlain valley ; frequent.

AMARANTUS

- A. blitoides**, Watson. Yards and waste places ; occasional, becoming more common.
A. graecizans, L. (*A. albus*, L.) Waste places ; a recently introduced weed ; railroad yards and gardens. Burlington, Charlotte, *Pringle* ; Bennington, *Eggleston*.
A. HYBRIDUS, L. (*A. hypochondriacus*, L.) Old garden, Peacham, *Blanchard*.
A. HYBRIDUS, L. var. *PANICULATUS*, Uline and Bray. (*A. paniculatus*, L.) Shelburne, garden weed, *Pringle* ; West Windsor, *Blanchard*.
A. RETROFLEXUS, L. Rich cultivated ground ; common.

PHYTOLACCACEAE. POKEWEED FAMILY

PHYTOLACCA

- P. decandra**, L. Pokeweed. Pastures and fields ; occasional.

FICOIDEAE

MOLLUGO

- M. VERTICILLATA**, L. Carpet Weed. Sandy banks and waste places ; frequent

PORTULACACEAE. PURSLANE FAMILY

CLAYTONIA

- C. Caroliniana**, Michx. Spring Beauty. Rich, open woods ; common.
C. Virginica, L. Intervale in Colchester, *Torrey, Jones* ; New Haven, *Pringle*.

PORTULACA

- P. OLERACEA, L. Purslane. Garden weed ; common.

CARYOPHYLLACEAE. PINK FAMILY

AGROSTEMMA

- A. GITHAGO, L. (*Lychnis Githago*, Lam.) Corn Cockle. Fields ; occasional.

ARENARIA. SANDWORT

- A. *Groenlandica*, Spreng. Common on rocks at summits of Mt. Mansfield and Camel's Hump.
 A. *lateriflora*, L. (*Moehringia lateriflora*, Fenzl.) Moist banks and shores ; occasional.
 A. *macrophylla*, Hook. Abundant on limestone ledges above Proctorsville, *Eggleston*.
 A. *SERPILLIFOLIA*, L. Dry rocky places ; frequent.
 A. *stricta*, Michx. (*A. Michauxii*, Hook, f.) Cliffs and headlands ; occasional.
 A. *verna*, L. var. *hirta*, Watson. Smuggler's Notch, *Pringle*.

CERASTIUM. MOUSE-EAR CHICKWEED

- C. *arvense*, L. Dry rocky places ; occasional.
 C. *nutans*, Raf. (*C. longipedunculatum*, Muhl.) Thin soil on ledges, west of the Green Mountains ; occasional.
 C. *VULGATUM*, L. Fields ; common.

DIANTHUS. PINK

- D. *ARMERIA*, L. Fields ; Castleton, *Ross*.
 D. *BARBATUS*, L. Sweet William. Garden escape. Rutland, *Eggleston* ; Stowe, *Wild* ; Manchester, *Miss Day*.
 D. *DELTOIDES*, L. Roadsides and cemeteries ; occasional.

LYCHNIS

- L. *ALBA*, Mill. (*L. vespertina*, Sibth.) Weed in fields ; Peacham, *Blanchard* ; Middlebury, *Brainerd* ; Clarendon Springs and Rutland, *Eggleston*.
 L. *CHALCEDONICA*, L. Peacham, *Blanchard* ; Barnet, *Jesup* and *Sargent*.
 L. *CORONARIA*, L. Rocky pastures ; abundant on Round Mountain, Shrewsbury, *Eggleston* ; Jamaica, *Bates*.
 L. *DIOICA*, L. (*L. diurna*, Sibth.) Brattleboro, *Bates* and *Jones*.

SAGINA

- S. decumbens*, Torr. & Gray. With *Spergularia rubra*, roadside below Brattleboro, Grout.
- S. procumbens*, L. Springy places. "Brattleboro," Frost; Peacham, Blanchard; Newbury, Jesup and Sargent; Walden and Cabot, Burbank; Randolph Center, Bates.

SAPONARIA

- S. officinalis*, L. Bouncing Bet. Waste places; common.
- S. vaccaria*, L. (*Vaccaria vaccaria*, Britt.) Vernon, Grout; Westmore, J. R. Churchill; Pownal, Eggleston.

SILENE

- S. antirrhina*, L. Catchfly. Dry soil; frequent.
- S. cucubalus*, Wibel. (*S. vulgaris*, Garcke.) Bladder Campion. Roadsides and fields; occasional.
- S. noctiflora*, L. Fields and waste places; occasional.

SPERGULA

- S. arvensis*, L. Corn Spurrey. Fields; occasional.

SPERGULARIA. (BUDA, TISSA)

- S. rubra*, Presl. Royalton, Ward; Brattleboro, Grout; Mt. Holly, Eggleston.

STELLARIA. (ALSINE.) CHICKWEED

- S. borealis*, Bigel. Cold wet places in the mountains; frequent.
- S. graminea*, L. Roadsides and moist grass lands; frequent.
- S. longifolia*, Muhl. Damp intervals and thickets; occasional.
- S. media*, Smith. In lawns and waste places; abundant.
- S. uliginosa*, Murr. About cold springs. Rochester, Chittenden, Eggleston; Vernon, Grout.

NYMPHAEACEAE. WATER LILY FAMILY

BRASENIA. WATER SHIELD

- B. peltata*, Pursh. (*B. purpurea*, Casp.) Ponds; occasional.

NUPHAR. (NYMPHÆA.) YELLOW POND LILY

- N. advena*, Ait. f. Common in ponds and slow streams.
- N. advena*, Ait. f. var. *minus*, Morong. (*Nymphaea rubrodisca*, Greene.) Still water; occasional.

- N. minimum**, Smith. (*N. Kalmianum*, Ait.) Ponds and slow streams ; frequent.

NYMPHÆA. (CASTALIA.) WHITE WATER LILY

- N. odorata**, Ait. Ponds and slow streams ; common.
N. odorata, Ait. var. *minor*, Sims. With the species ; frequent.
N. reniformis, DC. (*N. tuberosa*, Paine.) Lake Champlain and tributaries ; common.

ILLECEBRACEÆ.¹

ANYCHIA

- A. capillacea**, DC. (*A. Canadensis*, B. S. P.) Dry open woodlands. Pownal, *Robbins, Eggleston*; West Rutland, *Eggleston*.

CERATOPHYLLACEÆ

CERATOPHYLLUM

- C. demersum**, L. Slow streams and ponds ; frequent.

MAGNOLIACEÆ. MAGNOLIA FAMILY

LIRIODENDRON

- L. Tulipifera**, L. Tulip-tree. "Hoosic valley," *Mrs. Carr*; Pownal, *Eggleston*.

RANUNCULACEÆ. CROWFOOT FAMILY

ACTÆA. CROWOOSH

- A. alba**, Bigel. White Baneberry. Rich woods ; common.
A. spicata, L. var. *rubra*, Ait. (*A. rubra*, Willd.) Red Baneberry. Rich woods ; common.

ANEMONE

- A. Canadensis**, L. (*A. Pennsylvanica*, L.) Stony banks ; common along Lake Champlain and its tributaries.
A. cylindrica, Gray. Dry woods and fields ; frequent.
A. multifida, Poir. Colchester and Winooski Falls, *Robbins*; Highgate Springs, *Jesup*.

¹ The *Illecebraceæ* should come after the *Carophyllaceæ* on the preceding page.

- A. quinquefolia**, L. (*A. nemorosa*, L. var. *quinquefolia*, Gray.) Wind Flower. Woodlands; common.
- A. riparia**, Fernald. (*A. Virginiana*, var. *alba*, Wood.) (*Rhodora* 1:51. 1899.) Gravelly and rocky banks; frequent in western and northern Vermont.
- A. Virginiana**, L. Woods and meadows; common.

ANEMONELLA. (SYNDESMON)

- A. thalictroides**, Spach. Rue Anemone. North Pownal, common on rich wooded hills, *Eggleston*.

AQUILEGIA. COLUMBINE

- A. Canadensis**, L. Rocky places; common.
- A. vulgaris**, L. Common in gardens and occasional as a wayside escape.

CALTHA. MARSH MARIGOLD

- C. palustris**, L. Wet meadows and swamps; common.

CLEMATIS

- C. verticillaris**, DC. (*Atragene Americana*, Sims.) Rocky woods; occasional.
- C. Virginiana**, L. Virgin's Bower. River banks and moist thickets; common.

COPTIS

- C. trifolia**, Salisb. Goldthread. Wet woods; common.

HEPATICA

- H. acutiloba**, DC. (*H. acuta*, Britton) Woods; common.
- H. triloba**, Chaix. (*H. Hepatica*, Karst.) Warm open woods; frequent.

HYDRASTIS

- H. Canadensis**, L. Golden Seal. Shelburne, *Horsford*.

RANUNCULUS. BUTTERCUP

- R. abortivus**, L. Shady banks; common.
- R. abortivus**, L. var. *eucyclus*, Fernald. (*Rhodora* 1:52. 1899.) Cool woods. North Pownal, *Eggleston*.
- R. acris**, L. Everywhere common as a weed in grass lands.
- R. acris**, L. var. *STEVENI*, Andrez. (*Rhodora* 1:227. 1899.) Common.
- R. aquatilis**, L. var. *trichophyllus*, Gray. (*Batrachium trichophyllum*, Bossch.) Ponds and slow streams; frequent.

- R. BULBOSUS** L. Sparingly introduced in fields ; Whiting, *Brainerd* ; Thetford, *Blanchard* ; Burlington, *Collins* ; Pownal, *Eggleston*.
- R. circinatus**, Sibth. (*Batrachium divaricatum*, Wimm.) Ponds and slow streams ; rare.
- R. fascicularis**, Muhl. "Burlington," *Torrey* ; "Norwich," *Blanchard* ; "Brattleboro," *Frost* ; Snake Mountain, *Brainerd*.
- R. Flammula**, L. var. *reptans*, E. Meyer. (*R. reptans*, L.) Sandy shores ; frequent.
- R. hispidus**, Michx. Abundant on dry hills. North Pownal, *Eggleston*.
- R. multifidus**, Pursh. (*R. delphinifolius*, Torr.) Still water and muddy banks ; occasional.
- R. Pennsylvanicus**, L. f. Wet places ; frequent.
- R. recurvatus**, Poir. Moist woods and swamps ; frequent.
- R. repens**, L. Campus, Burlington, introduced with grass seed, *Jones*.
- R. septentrionalis**, Poir. Wet places ; common.

THALICTRUM. MEADOW RUE

- T. dioicum**, L. Rocky woodlands ; common.
- T. polygamum**, Muhl. Moist meadows ; common.

BERBERIDACEAE. BARBERRY FAMILY

BERBERIS

- B. vulgaris**, L. Barberry. Common in cultivation and a frequent escape. Especially abundant along streams in Ira, *Eggleston*.

CAULOPHYLLUM

- C. thalictroides**, Michx. Blue Cohosh. Rich woods ; common.

PODOPHYLLUM

- P. peltatum**, L. Mandrake. "Castleton," *Branch* ; Middlebury, *Brainerd* ; common at N. Pownal, *Eggleston* ; also occasional as a garden escape.

MENISPERMACEAE. MOONSEED FAMILY

MENISPERMUM

- M. Canadense**, L. Moonseed. Moist banks and thickets ; occasional.

LAURACEAE

LINDERA. (BENZOIN)

L. Benzoin, Blume. Spicebush. Damp woods; rare.

SASSAFRAS

S. officinale, Nees. (*S. Sassafras*, Karst.) Pownal, *Robbins, Eggleston*; Hartland and Brattleboro, *Bates*; Vernon, *Grout*.

PAPAVERACEAE. POPPY FAMILY

CHELIDONIUM

C. MAJUS, L. Celandine. Waste places; frequent.

SANGUINARIA

S. Canadensis, L. Blood-root. Borders of rich woods; common.

FUMARIACEAE

ADLUMIA

A. chirrrosa, Raf. (*A. fungosa*, Greene.) Mountain Fringe. Rich, rocky woods; occasional.

CORYDALIS. (CAPNOIDES)

C. aurea, Willd. Rocky banks of western Vermont; rare. Norwich, *Jesup*, probably introduced.

C. glauca, Pursh. (*C. sempervirens*, Borck.) Rocky woodlands; frequent.

DICENTRA. (BICUCULLA)

D. Canadensis, DC. Squirrel Corn. Rich woods; frequent.

D. Cucullaria, DC. Dutchman's Breeches. Rich wooded hillsides; frequent.

FUMARIA

F. OFFICINALIS, L. Fumitory. Occasionally persistent in old gardens.

CRUCIFERAE. MUSTARD FAMILY

ARABIS. ROCK CRESS

A. Canadensis, L. Shady ledges; occasional. "Winooski Falls," *Torrey*; Shoreham and Weybridge, *Brainerd*; Pownal and Twin Mountain, W. Rutland, *Eggleston*.

- A. confinis**, Watson. (*A. brachycarpa*, Britton) Dry, rocky banks and cliffs; occasional.
- A. hirsuta**, Scop. Rocky places; frequent.
- A. laevigata**, Poir. Rocky places; occasional.
- A. lyrata**, L. Mt. Equinox, Manchester, *Miss Day*; N. Pownal, *Eggleston*.
- A. perfoliata**, Lam. (*A. glabra*, Bernh.) Occasional, apparently becoming more common as an introduced weed in fields.

BARBAREA. WINTER CRESS

- B. stricta**, Andrz. Wet places; frequent.
- B. vulgaris**, R. Br. (*B. Barbarea*, MacM.) (Including former variety *arcuata*.) Wet places; common.

BERTEROA

- B. incana**, DC. A weed in lawns. Burlington, *Miss Towle*; roadside, Colchester and Essex Junction, *Mrs. Flynn*.

BRASSICA

- B. campestris**, L. Wild Turnip. Fields; frequent.
- B. juncea**, Cosson. Indian Mustard. Fields and waste places; occasional.
- B. nigra** Koch. Black Mustard. Waste places and fields; frequent.
- B. sinapistrum**, Boiss. (*B. arvensis*, B. S. P.) Charlock. Fields; common.

BRAYA

- B. humilis**, Robinson. (*Sisymbrium humile*, Meyer.) Willoughby Mountain, *H. Mann*.

CAMELINA. FALSE FLAX

- C. microcarpa**, Andrz. (*C. sativa* of Gray Manual in part.) Weed in fields; occasional. Burlington, *Jones*. The plant recorded as *C. sativa* by our earlier botanists, e. g. "Ferrisburgh," *Robbins*, "Bellows Falls," *Carey*, was probably *C. microcarpa*.

CAPSELLA. (BURSA)

- C. bursa-pastoris** Moench. Shepherd's Purse. Waste places; common.

CARDAMINE

- C. parviflora**, L. (*C. hirsuta*, L. var. *sylvatica*, Gaud.) Dry rocky woods; occasional.

- C. Pennsylvanica**, Muhl. (*C. hirsuta* of Gray Manual in part.) Cold wet common. A form with more spreading pods, *C. flexuosa*, occurs woods ; in the mountains.
- C. pratensis**, L. Cold wet meadows. "Whiting and Alburgh," *Chandler* ; "St. Albans," *Robbins* ; Middlebury, *Brainerd* ; W. Rutland, *Mrs. Flynn* ; Ira, *Eggleston*.
- C. rhomboidea**, DC. (*C. bulbosa*, B. S. P.) Cold, wet meadows. "Castleton," *Robbins* ; Middlebury, *Brainerd* ; Rutland and Ira, *Eggleston* ; W. Rutland, *Mrs. Flynn*.

DENTARIA. PEPPER-ROOT

- D. diphylla**, L. Rich, moist woods ; common.
- D. laciniata**, Muhl. Rich woods. "Castleton," *Robbins* ; Shelburne, *Pringle* ; Colchester, *Torrey* ; Gardiner's Island, *Horsford* ; Proctor, *Ross* ; S. Hero, *Brainerd*.
- D. maxima**, Nutt. Shelburne, *Pringle* ; Burlington, *Perkins* ; Norwich, *Eggleston*.

DRABA

- D. incana**, L. Willoughby Mountain, *Tuckerman* ; Smuggler's Notch, *Pringle*.
- D. incana**, L. var. *arabisans*, Watson. Mountain cliffs and headlands of Lake Champlain ; occasional.

ERYSIMUM

- E. cheiranthoides**, L. A weed in fields ; occasional, but apparently increasing.

HESPERIS

- H. MATRONALIS**, L. Rocket. Middlebury, *Brainerd* ; Monkton, *Eggleston*.

LEPIDIUM. PEPPERGRASS

- L. apetalum**, Willd. (*L. intermedium*, Gray.) Dry soil, especially along railroads ; common.
- L. CAMPESTRE**, Br. Brattleboro, *Bates* ; Vergennes and Burlington, *Jones*.
- L. Virginicum**, L. Dry soil, especially along railroads ; frequent.

NASTURTIUM. (RORIPA.) WATER CRESS

- N. ARMORACIA**, Fries. Horseradish. Moist places about dwellings ; frequent.
- N. lacustre**, Gray. (*R. Americana*, Britton.) Marshy borders of inlets of Lake Champlain ; occasional.

- N. OFFICINALE**, R. Br. (*R. Nasturtium*, Rusby.) Water Cress. Cool running waters, Rutland, Bennington, *Eggleston*; Charlotte, *Pringle*; Randolph, *Bates*.
- N. SYLVESTRE**, R. Br. Yellow Cress. Alluvial meadows of the Connecticut River; frequent. "A persistent weed in intervals at Westminster, although it rarely, if ever, produces viable seed." *W. H. Blanchard*.
- N. terrestre**, R. Br. (*N. palustre*, DC.) Dry soil. Ripton, *Brainerd*.
- N. terrestre**, R. Br. var. *hispidum*, Fisch. and Mey. (*R. hispida*, Britton.) Wet places; frequent.

RAPHANUS

- R. RAPHANISTRUM**, L. Radish. "South Hero," *Robbins*; Windsor, Hartland, *Eggleston*; Westminster, *Blanchard*.

SISYMBRIUM

- S. ALTISSIMUM**, L. Fort Ethan Allen, *Mrs. Flynn*; Railroad, Middlebury, *Brainerd*.
- S. OFFICINALE**, Scop. Hedge Mustard. Common in waste places.

SUBULARIA

- S. aquatica**, L. Abundant in South Pond, Marlboro, *Grout*.

THLASPI

- T. ARVENSE**, L. Penny Cress. Waste places; occasional.

CAPPARIDACEAE. CAPER FAMILY

POLANISIA

- P. graveolens**, Raf. Sandy shores of Lake Champlain; common.

SARRACENIACEAE. PITCHER PLANT FAMILY

SARRACENIA

- S. purpurea**, L. Pitcher-plant. Sphagnum bogs; frequent.

DROSERACEAE. SUNDEW FAMILY

DROSERA. SUNDEW

- D. intermedia**, Hayne. (*D. intermedia*, Hayne, var. *Americana*, DC.) Bogs. Fort Ethan Allen Pond, *Pringle*; Waterman's Pond, Thetford, *Blanchard*. Ponds of Windham County.
- D. rotundifolia**, L. Bogs and wet banks; frequent.

CRASSULACEAE. ORPINE FAMILY

PENTHORUM

P. sedoides, L. Ditches and swamps ; frequent.

SEDUM. STONECROP

S. acre, L. On rocks ; occasional.

S. telephium, L. Live-forever. Fields and roadsides ; common.

SAXIFRAGACEAE. SAXIFRAGE FAMILY

CHRYOSPLENIUM

C. americanum, Schwein. Wet shady places ; common.

MITELLA. MITREWORT

M. diphylla, L. Rich woods ; common.

M. nuda, L. Deep moist woods, in moss ; frequent.

PARNASSIA

P. caroliniana, Michx. Grass-of-Parnassus. Wet banks and meadows ; common in Bennington county, occasional elsewhere.

RIBES

R. cynosbati, L. Wild Gooseberry. Rocky woods ; common.

R. floridum, L'Her. Black Currant. Moist rich woods ; frequent.

R. lacustre, Poir. Cold swamps and mountain woods ; frequent.

R. oxyacanthoides, L. Cold swamps ; frequent.

R. prostratum, L'Her. Fetid Currant. Cold banks and mountain woods ; frequent.

R. rubrum, L. var. *subglandulosum*, Maxim. Red Currant. Cold swamps and mountain woods ; occasional.

SAXIFRAGA. SAXIFRAGE

S. aizoides, L. Yellow Mountain Saxifrage. Moist cliffs, Willoughby Mountain, A. Wood ; Smuggler's Notch, Pringle.

S. aizoon, Jacq. Mountain Saxifrage. Willoughby Mountain, Smuggler's Notch, Hazen's Notch, Montgomery, Pringle.

S. oppositifolia, L. Willoughby Mountain, A. Wood ; Smuggler's Notch, Pringle.

S. Pennsylvanica, L. Swamp Saxifrage. Bogs; common.

S. Virginensis, Michx. Early Saxifrage. Exposed rocks and dry hillsides; common.

TIARELLA

T. cordifolia, L. False Mitrewort. Rich moist woods; common.

HAMAMELIDEAE

HAMAMELIS

H. Virginiana, L. Witch Hazel. Low woods; common.

PLATANACEAE

PLATANUS

P. occidentalis, L. Sycamore. Alluvial banks; occasional.

ROSACEAE. ROSE FAMILY

AGRIMONIA.¹ AGRIMONY

A. striata, Michx. (*A. Brittoniana*, Bicknell. *A. Eupatoria*, American authors in part.) Thickets and roadsides especially in mountain towns; frequent.

A. gryposepala, Wallr. (*A. hirsuta*, Bicknell. *A. Eupatoria*, American authors in part.) Woods and thickets; frequent.

AMELANCHIER.² SERVICE BERRY

A. Canadensis, Torr. & Gray. Shad Bush. Woods; common.

A. Canadensis, Torr. & Gray, var. (?) *oblongifolia*, Torr. & Gray. (*A. Botryapium*, DC.) Cold swamps; frequent.

A. Canadensis, Torr. & Gray, var. *rotundifolia*, Torr. & Gray. (*A. rotundifolia*, Roem.) Rocky shores of Connecticut and Champlain valleys; occasional.

A. oligocarpa, Roem. Summits of the higher mountains; occasional.

A. spicata, Dec. Dry rocky woods; frequent.

¹ See Robinson, B. L. The Nomenclature of our New England Agrimonies. *Rhodora*. December, 1900.

² Several other distinct forms of *Amelanchier*, perhaps good species, occur in the State and are awaiting critical study.

CRATÆGUS. HAWTHORN

- C. coccinea**, L. Scarlet Thorn. The plants of Vermont which have heretofore passed under this name are apparently of six or more distinct species. They are being carefully studied by Professor C. S. Sargent who will doubtless soon report his conclusions.
- C. Crus-galli**, L. Cockspur Thorn. Ferrisburgh, *Horsford*; Mt. Independence, *Eggleston*; Gardiner's Island, *C. E. Pinney*; Chimney Point, *Brainerd*.
- C. macracantha**, Lodd. (*C. coccinea*, L. var. *macracantha*, Dudley.) Long-spine Thorn. Moist thickets and rich hillsides; common.
- C. OXYACANTHA**, L. English Hawthorn. Occasionally escaped from cultivation. "Peacham," *Blanchard*; Burlington, *Jones*; Knight's Island, *Brainerd*.
- C. pruinosa**, Wend. Thickets, waysides and pastures; frequent. Fruit very distinct, glaucous, deep red, ripening late.
- C. punctata**, Jacq. Dotted Thorn. Common.
- C. rotundifolia**, Borck. Old pastures and waysides; occasional.

DALIBARDA

- D. repens**, L. Cool moist woods; frequent.

FRAGARIA. STRAWBERRY

- F. Americana**, Britton. Woods; common.
- F. vesca**, L. Door-yard, Middlebury, *Brainerd*.
- F. Virginiana**, Mill. Fields; common.

GEUM. AVENS

- G. Canadense**, Jacq. (*G. album*, Gmelin.) Borders of woods; common.
- G. macrophyllum**, Willd. Moist open mountain woods; common above 1500 feet altitude.
- G. rivale**, L. Purple Avens. Wet meadows and bogs; common.
- G. strictum**, Ait. Moist meadows; common.
- C. Virginianum**, L. Middlebury, *Brainerd*; Burlington, *Mrs. Flynn*.

POTENTILLA. CINQUEFOIL

- P. Anserina**, L. Common on beaches of Lake Champlain. Royalton, *Ward*; Rutland, Sumner's Falls, *Eggleston*.

- P. argentea**, L. Silverweed. Dry barren fields ; common.
- P. arguta**, Pursh. Rocky hills ; occasional.
- P. fruticosa**, L. Shrubby Cinquefoil. Swamps and moist cliffs. Smuggler's Notch ; Lake Willoughby. Troublesome as a pasture weed in south-western Vermont.
- P. Monspelienensis**, L. (*P. Norvegica*, L.) Dry soil ; frequent.
- P. palustris**, Scop. (*Comarum palustre*, L.) Marsh Cinquefoil. Cool bogs ; frequent.
- P. RECTA**, L. Brattleboro, *Bates* ; Rutland, *Eggleston*.
- P. simplex**, Michx.¹ (*P. Canadensis* of American authors in part.) Dry soil ; common.
- P. tridentata**, Ait. Summits of cliffs and mountains ; occasional, e. g. Mt. Mansfield, Camel's Hump, Snake Mountain, Pownal.

POTERIUM. (SANGUISORBA.) BURNET

- P. Canadense**, Benth. and Hook. Brattleboro, *Frost* ; abundant on the banks of the West River, *Grout*.
- P. SANGUISORBA**, L. Roadside, Charlotte Center, *Pringle*.

PRUNUS. PLUM. CHERRY

- P. Americana**, Marshall. var. **nigra**, Waugh. (*P. nigra*, Ait.) Canada Plum. Woods and fencerows ; frequent.
- P. AVIUM**, L. Mazzard Cherry. Manchester, *Miss Day*.
- P. cuneata**, Raf. Sand banks of lake shore, Burlington, *Pringle*. Frequent on the sand plains, South Burlington, *Howe*.
- P. Pennsylvanica**, L. f. Wild Red Cherry. Roadside thickets ; common.
- P. pumila**, L. Sand Cherry. Rocky or sandy shores of the Connecticut and Champlain valleys ; occasional.
- P. serotina**, Ehrh. Black Cherry. Woodlands ; common.
- P. Virginiana**, L. Choke Cherry. Fencerows, woods and banks ; common.

PYRUS

- P. Americana**, DC. (*Sorbus Americana*, Marsh.) American Mountain Ash. Swamps and mountain woods ; frequent.

¹ Just as this is going to press a letter is received from M. L. Fernald, stating that "*Potentilla simplex*, Michx. is the common sprawling species of New England, while *P. Canadensis* is a low, hardly repent, canescent species which hardly reaches southern Maine and New Hampshire." It was not possible to re-examine Vermont specimens other than those in the herbarium of the University of Vermont. All of those proved to be *P. simplex* as above defined, and the name *P. Canadensis* is therefore omitted from the list.

- P. AUCUPARIA**, Gaert. European Mountain Ash. Peacham, *Blanchard*; frequent about Burlington, *Jones*.
- P. arbutifolia**, L. f. var. *melanocarpa*, Hook. (*Aronia nigra*, Britton.) Chokeberry. Swamps and damp thickets; common.
- P. MALUS**, L. (*Malus Malus*, Britton.) Apple. Fencerows and roadsides; frequent.
- P. sambucifolia**, Cham. and Schlecht. (*Sorbus sambucifolia*, Roem.) Elderleaf Mountain Ash. Mt. Mansfield, Willoughby Mountain, *Pringle*.

ROSA. ROSE

- R. acicularis**, Lindl. Snake Mountain and Burlington, *Brainerd*; Manchester, *Miss Day*.
- R. blanda**, Ait. Roadsides and ledges; frequent.
- R. Carolina**, L. Borders of swamps and streams; common.
- R. CINNAMOMEA**, L. Cinnamon Rose. Roadsides and about old gardens; frequent.
- R. humilis**, Marsh. Dry rocky slopes; common.
- R. lucida**, Ehrh. (*R. humilis*, Marsh, var. *lucida*, Britton.) North Pownal, *Eggleston*.
- R. PIMPINELLIFOLIA**, L. Naturalized in pasture, Johnson, *Groat*.
- R. RUBIGINOSA**, L. Sweet-brier. Old pastures; frequent.

RUBUS. BLACKBERRY. RASPBERRY

- R. argutus**, Link. (*R. villosus*, var. *frondosus*, Torr.) Thickets and waysides; frequent.
- R. argutus**, Link. var. *Randii*, Bailey. Dry thickets; occasional.
- R. Canadensis**, L. (*R. Millspaughii*, Britton.) Thornless Blackberry. Moist thickets in mountains; common.
- R. hispidus**, L. Running Swamp Blackberry. Moist woods; frequent.
- R. Idaeus**, L. var. *anomalus*, Arrhenius. (*Rhodora* 2: 195, 1900.) Crevices of limestone ledges. Cavendish, *Eggleston*. Heretofore known only as a very rare plant of northern Europe.
- R. Idaeus**, L. var. *strigosus*, Maxim. Red Raspberry. Thickets and hills; common.
- R. neglectus**, Peck. (*R. strigosus* × *occidentalis*, C. F. Austin.) Purple Raspberry. Richmond, *Pringle*; Burlington, *Jones*.
- R. nigrobaccus**, Bailey. (*R. villosus*, authors not of Ait.) Thickets and waysides; common.

- R. nigrobaccus**, Bailey, var. **albinus**, Bailey. White Blackberry. Pittsfield, *Eggleston*; occasional.
- R. occidentalis**, L. Black Raspberry. Rich shaded hillsides; common.
- R. odoratus**, L. Purple-flowering Raspberry. Moist shaded hillsides; common.
- R. sativus**, Brainerd. (*R. nigrobaccus*, Bailey. var. *sativus*, Bailey.) In dry alluvial soil; Weybridge, *Brainerd*; West Rutland, *Eggleston*.
- R. setosus**, Bigelow. Moist soil, especially in the mountains; frequent.
- R. triflorus**, Richardson. (*R. Americanus*, Britton.) Dwarf Raspberry. Moist cool soil; common.
- R. villosus**, Ait. (*R. Canadensis*, of Gray Manual, not of L.) Dewberry. Banks and shores; common.
- R. nigrobaccus** × **villosus**, Bailey. Weybridge, *Brainerd*; Fair Haven, *Eggleston*.

SPIRÆA

- S. lobata**, Jacq. (*Ulmaria rubra*, Hill.) Roadside escape. Peacham, *Blanchard*; Randolph, *Bates*; Lower Cabot, *Eggleston*.
- S. salicifolia**, L. var. **latifolia**, Wiegand. (See *Rhodora* 2: 103. 1900.) Meadow Sweet. Wet meadows and cliffs; common.
- S. SORBIFOLIA**, L. A garden escape, well established in several stations, e. g. Brattleboro, Burlington.
- S. tomentosa**, L. Steeple Bush. Hardhack. Rocky pastures; common.
- S. ULMARIA**, L. (*Ulmaria Ulmaria*, Borkh.) English Meadow Sweet. Randolph, *Bates*; Mendon, *Eggleston*.

WALDSTEINIA

- W. fragarioides**, Tratt. Barren Strawberry. Wooded hillsides; common.

LEGUMINOSAE. PULSE FAMILY

AMPHICARPA

- A. monoica**, Nutt. (*Falcata comosa*, Kuntze) Thickets; common.

APIOS

- A. tuberosa**, Moench. (*A. Apios*, MacM.) Ground-nut. Low moist ground; frequent.

ASTRAGALUS

- A. alpinus**, L. Rocky shores of Connecticut River; occasional.

- A. *Blakei*, Eggleston. (Bot. Gaz. 20:271. 1895.) Alpine Cliffs. Willoughby Mountain, *J. Blake*; Smuggler's Notch and Underhill Notch, Mt. Mansfield, type stations.
- A. *Canadensis*, L. Shores and islands of Lake Champlain; frequent.
- A. *Robbinsii*, Gray. On limestone rocks, near High Bridge, Winooski River, Burlington, *Robbins*. This, the only station in Vermont, was destroyed in 1894 by the set back of the dam of the Vermont Electrical Power company.
- A. *Robbinsii*, Gray. var. *Jesupi*,¹ Eggleston and Sheldon. Rocky shores of the Connecticut River.

BAPTISIA

- B. *AUSIRALIS*, R. Br. Royalton, *Ward*. (Rhodora, 2: 172. 1900.)
- B. *tinctoria*, R. Br. Wild Indigo. Dry open fields; Vernon, *Grout*; Pownal, *Churchill*.

CASSIA. SENNA

- C. *Marilandica*, L. Wild Senna. Alluvial soil; "Orwell," *Dr. Hill*; "Bel-lows Falls," *Carey*; Randolph, *Bates*; Hartford, *Jesup*.
- C. *nictitans*, L. Wild Sensitive plant. Vernon, *Grout*.

CORONILLA

- C. *VARIA*, L. Randolph, *Bates*. Escaped from garden.

CROTALARIA

- C. *sagittalis*, L. Rattlebox. Railroad banks; Vernon, *Grout*.

DESMODIUM. (MEIBOMIA.) TICK TREFOIL

- D. *acuminatum*, DC. (*M. grandiflora*, Kuntze.) Rich woods; common.
- D. *Canadense*, DC. Dry rich woods; common.
- D. *cuspidatum*, Torr. & Gray. (*M. bracteosa*, Kuntze.) Dry open woods. North Pownal, *Eggleston*.
- D. *Dillenii*, Darl. Open woodlands; frequent.
- D. *nudiflorum*, DC. Dry woods; common.
- D. *paniculatum*, DC. Copses; occasional.

¹ This plant in the unpressed state has the flattened *entire* pod of *Robbinsii*. Both this and *A. Blakei* are difficult to determine from pressed specimens since most of the sulcate appearance of the latter presses out.—*W. W. Eggleston*.

HEDYSARUM

- H. boreale*, Nutt. "Willoughby Mountain," *A. Wood*; Smuggler's Notch, *Pringle*.

LATHYRUS

- L. maritimus*, Bigelow. Beach Pea. Shores of Lake Champlain; occasional.
- L. ochroleucus*, Hook. Headlands of northern Lake Champlain; occasional.
- L. palustris*, L. Shores of Lake Champlain; frequent.
- L. palustris*, L. var. *myrtifolius*, Gray. "Vermont," Torrey and Gray. "Island in Ferrisburgh," *Morong*, in Walter Deane herbarium, Cambridge, Mass.

LESPEDEZA. BUSH CLOVER

- L. capitata*, Michx. Sandy soil; frequent.
- L. frutescens*, Britton. (*L. Stuevei*, Nutt. var. *intermedia*, Wats.) Dry open places; occasional.
- L. polystachya*, Michx. Dry open woods; occasional.
- L. violacea*, Pers. Dry woods. "Rockingham," *Carey*; Gardiner's Island, *Pringle*.

LUPINUS

- L. perennis*, L. Wild Lupine. Common in sand plains along Lake Champlain.

MEDICAGO. MEDICK

- M. ARABICA*, All. (*M. maculata*, Sibth.) Experiment Station, Burlington, *Jones*.
- M. DENTICULATA*, Willd. Ludlow, *Miss Pollard*; Hartland, *B. P. Ruggles*; Burlington, *Jones*.
- M. LUPULINA*, L. Black Medick. Roadsides and fields; common.
- M. SATIVA*, L. Alfalfa. Often cultivated and persistent or escaped.

MELILOTUS. SWEET CLOVER

- M. ALBA*, Lam. White Melilot. Waste or cultivated grounds; frequent.
- M. OFFICINALIS*, Willd. Yellow Melilot. Roadsides or waste places; occasional.

ROBINIA. LOCUST

- R. Pseudacacia*, L. Locust. Frequent in cultivation and escaped.
- R. viscosa*, Vent. Clammy Locust. Occasional in cultivation and tending to spread.

TRIFOLIUM. CLOVER.

- T. AGRARIUM**, L. Yellow or Hop Clover. Sandy soil; frequent.
T. ARVENSE, L. Rabbitfoot Clover. Old fields; frequent.
T. HYBRIDUM, L. Alsike Clover. Common.
T. PRATENSE, L. Red Clover.¹ Common.
T. repens, L. White Clover. Common.

VICIA. VETCH

- V. Cracca**, L. Blue Vetch. Meadows and roadsides; frequent.
V. SATIVA, L. Common Vetch. Adventive; occasional. White flowered form, Starr Farm, Burlington, *Mrs. Flynn*.
V. SATIVA, L. var. **ANGUSTIFOLIA**, Seringe. (*V. angustifolia*, Roth.) Middlebury, *Brainerd*.
V. TETRASPERMA, L. Meadows and pastures; occasional.

GERANIACEAE. GERANIUM FAMILY

ERODIUM

- E. CICUTARIUM**, L'Her. Stork's bill. Old gardens. Ludlow, *Miss Pollard*; Burlington, *Mrs. A. J. Groat*.

FLÆRKEA

- F. proserpinacoides**, Willd. Castleton, *Robbins*; Shelburne, *Pringle*.

GERANIUM

- G. Bicknellii**, Britton. (*G. Carolinianum*, L. var. *longipes*, Wats.) Dry rocky places; frequent.
G. maculatum, L. Cranesbill. Open woods; frequent.
G. Robertianum, L. Herb Robert. Rocky woods and ravines; common.

IMPATIENS. JEWEL-WEED. TOUCH-ME-NOT

- I. aurea**, Muhl. (*I. pallida*, Nutt.) Moist shady places, especially on mountain sides.
I. biflora, Walt. (*I. fulva*, Nutt.) Moist shady places; common.

OXALIS. WOOD SORREL

- O. Acetosella**, L. Wood Sorrel. Cool moist woods; common on mountain sides.

¹ Mammoth Red Clover, *T. medium*, L., is occasionally cultivated and is quite as hardy as is the common Red Clover. It has not been observed, however, except in cultivation.

- O. cymosa**, Small. (*O. corniculata*, L. var. *stricta*, of Gray Manual.) Lady's Sorrel. Fields and gardens; common.
- O. stricta**, L. Lady's Sorrel. (*O. corniculata*, L. var. *Dillenii*, Trelease.) Burlington, *T. E. Hazen*.

LINACEAE. FLAX FAMILY

LINUM

- L. USITATISSIMUM**, L. Flax. Occasionally adventive.

RUTACEAE. RUE FAMILY

RUTA

- R. GRAVEOLENS**, L. Rue. Well established at Weybridge, *Brainerd*.

XANTHOXYLUM

- X. Americanum**, Mill. Prickly Ash. Rocky woods and banks; occasional.

POLYGALACEAE. MILKWORT FAMILY

POLYGALA

- P. paucifolia**, Willd. Fringed Polygala. Common, especially in light soil.
- P. polygama**, Walt. Dry sandy soil; occasional.
- P. sanguinea**, L. (*P. viridescens*, L.) Moist sandy soil. Windsor, *Leland*; Newfane, *Grout*; Burlington, *Mrs. Flynn*; Milton, *Jones*.
- P. Senega**, L. Seneca Snake-root. Rocky soil; western Vermont; occasional.
- P. verticillata**, L. Sandy soil. "Bellows Falls," *Tuckerman*; Brattleboro, *Grout*; Vernon, *B. L. Robinson*; Pownal, *Eggleston*.
- P. verticillata**, L. var. *ambigua*, Wats. and Coult. (*P. ambigua*, Nutt.) Pownal, *Robbins*; Vernon, *B. L. Robinson*; Brattleboro, *Grout*; Burlington, *Howe*.

EUPHORBIACEAE. SPURGE FAMILY

ACALYPHA

- A. Virginica**, L. Moist hollows in fields; frequent.

EUPHORBIA. SPURGE

- E. corollata**, Sandy field. Burlington, *Mrs. Flynn*; recently introduced from the west.
- E. CYPARISSIAS**, L. Cypress Spurge. Old cemeteries and roadsides; common.

- E. HELIOSCOPIA**, L. Waste places and gravelly shores ; frequent in the Champlain valley.
- E. hirsuta**, Wiegand. (See appendix in Britton and Brown Flora.) Manchester, *Miss Day* ; North Pownal, *Eggleston*.
- E. maculata**, L. Common in waste places.
- E. Preslii**, Guss. (*E. nutans*, Lag.) Waste places ; occasional.
- E. PEPLUS**, L. Charlotte, *Pringle* ; Wallingford, *Brainerd*.
- E. PLATYPHYLLA**, L. Shores and waste places ; occasional.

EMPETRACEAE

EMPETRUM. CROWBERRY

- E. nigrum**, L. Summits of Mt. Mansfield and Camel's Hump, *Robbins*.

ANACARDIACEAE

RHUS. SUMACH

- R. Canadensis**, Marsh. (*R. aromatica*, Ait.) Dry rocky banks of western Vermont ; occasional.
- R. copallina**, L. Rocky hills ; frequent.
- R. glabra**, L. Rocky soil ; common in the Connecticut and Hoosic valleys. South Charlotte, *Horsford* ; Colchester, *Mrs. Flynn*.
- R. Toxicodendron**, L. (*R. radicans*, L.) Poison Ivy. Banks and moist thickets ; common.
- R. typhina**, L. (*R. hirta*, Sudw.) Staghorn Sumach. Hillsides ; common.
- R. Vernix**, L. (*R. venenata*, DC.) Poison Sumach. Occasional in swamps.

ILICINEAE. HOLLY FAMILY

ILEX. HOLLY

- I. verticillata**, Gray. Winterberry. Thickets ; common.
- I. verticillata**, Gray. var. *tenuifolia*, Wats. (*Rhodera* 2 : 105, 1900.) Mouth of Winooski River, *Eggleston*.

NEMOPANTHUS

- N. fascicularis**, Raf. (*Illicioides mucronata*, Britton.) Mountain Holly. Cold wet woods ; frequent.

CELASTRACEAE**CELASTRUS**

- C. scandens**, L. Bittersweet. Moist banks and thickets ; common.

SAPINDACEAE. MAPLE FAMILY**ACER. MAPLE**

- A. Negundo**, Linn. (*Negundo aceroides*, Moench.) Boxelder. Frequent along the banks of the Winooski River.
- A. Pennsylvanicum**, L. Striped Maple. Rich woods ; common.
- A. rubrum**, L. Red Maple. Moist woods and swamps ; common.
- A. saccharinum**, L. (*A. dasycarpum*, Ehrh.) Silver Maple. Banks of rivers and lakes at low altitudes ; frequent.
- A. Saccharum**, Marsh. (*A. saccharinum*, Wang.) Sugar Maple. Rich woods ; common.
- A. Saccharum**, Marsh. var. *nigrum*, Britton. Black Sugar Maple. Moist soil, Lake Champlain valley ; occasional. "Windsor," *Michaux*.
- A. spicatum**, Lam. Mountain Maple. Cool ravines and mountain woodlands ; common,

STAPHYLEA

- S. trifolia**, L. Bladder-nut. Moist woods and thickets ; occasional.

RHAMNACEAE. BUCKTHORN FAMILY**CEANOTHUS**

- C. Americanus**, L. New Jersey Tea. Dry woodlands ; common.
- C. ovatus**, Desf. Sandy banks of Lake Champlain, Burlington.

RHAMNUS. BUCKTHORN

- R. alnifolia**, L'Her. Swamps ; frequent.
- R. CATHARTICA**, L. Buckthorn. Common in cultivation and a frequent escape in woods and fields.

VITACEAE. VINE FAMILY**AMPELOPSIS. WOODBINE**

- A. quinquefolia**, Michx. Moist thickets ; common.
- A. quinquefolia**, Michx. var. *radicantissima*, Rehder. Clinging closely to limestone ledges. Cornwall, *Bruinerd* ; Burlington, *Jones*.

VITIS. GRAPE

- V. bicolor**, LeConte. (*V. æstivalis*, of Gray Manual in part.) Summer Grape. Dry gravelly soil and at bases of cliffs ; frequent.
- V. Labrusca**, L. Fox Grape. Vernon, *Grout*.
- V. vulpina**, L. (*V. riparia*, of Gray Manual in part.) River Grape. River banks ; common.

TILIACEAE. LINDEN FAMILY

TILIA. LINDEN

- T. Americana**, L. Basswood. Woodlands ; common.

MALVACEAE. MALLOW FAMILY

ABUTILON

- A. AVICENNÆ**, Gaertn. (*A. Abutilon*, Rusby.) Velvet Leaf. Roadsides and waste places ; occasional.

HIBISCUS

- H. TRIONUM**, L. Bladder Ketmia. Occasional as a garden weed. Middlebury, *Brainerd* ; Peacham, *Blanchard* ; Pantton, *Jones*.

MALVA. MALLOW

- M. ALCEA**, L. Lyndon, *Congdon* ; Rutland, *Eggleston*.
- M. MOSCHATA**, L. Musk Mallow. Roadsides and waste places ; an occasional escape.
- M. ROTUNDIFOLIA**, L. Waste places ; everywhere common.
- M. SYLVESTRIS**, L. Occurs sparingly in several places.
- M. VERTICILLATA**, L. A garden weed, increasingly troublesome. Middlebury, *Brainerd* ; Burlington, *Jones*.
- M. VERTICILLATA**, L. var. *CRISPA*, L. Knight's Island, *Brainerd*.

HYPERICACEAE. ST. JOHNSWORT FAMILY

HYPERICUM. ST. JOHNSWORT

- A. Ascyron**, L. River banks ; occasional.
- H. boreale**, Bicknell. Manchester, *Miss Day*.
- H. Canadense**, L. Moist soil ; frequent.
- H. Canadense**, L. var. *majus*, Gray. Moist soil ; occasional.

- H. ellipticum*, Hook. Wet places ; frequent.
H. maculatum, Walt. Damp places ; frequent.
H. mutilum, L. Low ground ; common
H. nudicaule, Walt. (*Sarothra gentianoides*, L.) Brattleboro, *Frost*, *Grout*.
H. PERFORATUM, L. Common St. Johnswort. Fields and roadsides ; common.
H. Virginicum, L. (*Elodes campanulata*, Pursh., *Triadenum Virginicum* Raf.) Swamps ; frequent.

CISTACEAE. ROCK ROSE FAMILY

HELIANTHEMUM. ROCK ROSE

- H. Canadense*, Michx. Windham County, *B. L. Robinson* ; Fairlee Cliffs, *Sargent* and *Eggleston* ; Bald Mountain, Shrewsbury, *Eggleston*.
H. majus, B. S. P. Sterile soil ; frequent.

HUDSONIA

- H. tomentosa*, Nutt. Sandy beaches. Lake Champlain, Burlington Bay, Colchester Point, *Bigelow* ; Apple Tree Bay, *Mrs. Flynn*.

LECHEA. PINWEED

- L. intermedia*, Leggett. Dry sterile soil ; occasional.
L. major, Michx. (*L. villosa*, Ell.) Vernon, *B. L. Robinson*.

VIOLACEAE. VIOLET FAMILY

VIOLA. VIOLET

- V. arenaria*, DC. (*V. canina*, L. var. *puberula*, Watson.) Sand Violet. Rocky or sandy soil ; occasional. Abundant on sand plains about Burlington.
V. blanda, Willd. White Violet. Low wet ground ; common.
V. blanda, Willd. var. *palustriformis*, Gray. (*V. blanda*, Willd, var. *amoena*, B. S. P.) Cool rich woods ; occasional.
V. blanda, Willd. var. *renifolia*, Gray. (*V. renifolia*, Gray.) Wet mossy woods and swamps ; frequent.
V. Canadensis, L. Canada Violet. Woods ; common.
V. canina, L. var. *Muhlenbergii*, Troutv. (*V. Labradorica*, Schrank.) Dog Violet. Low shady ground ; common.
V. lanceolata, L. Moist places. Mud Pond, Rutland, *Eggleston* ; "Williston," *Bates* ; Lily Pond, Vernon, *Grout*.

- V. ovata*, Nutt. (*V. sagittata*, of Gray Manual in part.) Dry sandy soil ; frequent.
- V. palmata*, L. Blue Violet. Rich open woods. Pownal, *Robbins, Eggleston*.
- V. palmata*, L. var. *cucullata*, Gray. (*V. obliqua*, Hill.) Moist or dry ground ; common. A polymorphous group which recent authors are dividing into many species.
- V. pubescens*, Ait. Downy Yellow Violet. (Including var. *eriocarpa* Nutt.) Rich woods ; common.
- V. pubescens*, Ait. var. *scabriuscula*, Torr. and Gray. (*V. scabriuscula*, Schwein.) In moister situations ; frequent.
- V. rostrata*, Pursh. Long-spurred Violet. Rich woods ; common.
- V. rotundifolia*, Michx. Round-leaved Violet. Cool moist woods ; frequent.
- V. Selkirkii*, Pursh. Rich moist woods, especially in the mountains ; occasional.
- V. tricolor*, L. Pansy. Persistent in old gardens.

THYMELAEACEAE

DAPHNE

- D. mezereum*, L. Garden escape, in rocky woods. Burlington, *Jones*.

DIRCA

- D. palustris*, L. Leatherwood. Moist open woods ; frequent.

AEAGNACEAE

SHEPHERDIA

- S. canadensis*, Nutt. Red sandstone cliffs, western Vermont ; occasional.

LTHYRACEAE. LOOSESTRIFE FAMILY

DECODON

- D. verticillatus*, Ell. Swampy ground ; occasional in western Vermont.

LYTHRUM. LOOSESTRIFE

- L. alatum*, Pursh. Charlotte, *Pringle*.
- L. salicaria*, L. Wet meadows. Rutland, *Bigelow and Eggleston* ; Sharon, *Jesup and Sargent* ; Clarendon, *Grow* ; Wallingford, *Mrs. Flynn*.

MELASTOMACEAE

RHEXIA. DEER-GRASS

R. Virginica, L. "Brattleboro," *Frost*; Lily Pond, Vernon, *Grout*.

ONAGRACEAE. EVENING PRIMROSE FAMILY

CIRCÆA. ENCHANTER'S NIGHTSHADE

C. alpina, L. Deep woods; common.

C. intermedia, Ehrh. Manchester, *Miss Day*; Dorset, *Eggleston*.

C. Lutetiana, L. Woods; frequent.

EPILOBIUM. WILLOW HERB

E. adenocaulon, Haussk. Moist places, especially among the mountains; frequent.

E. angustifolium, L. (*Chamaenerion angustifolium*, Scop.) Fireweed. Common, especially in newly cleared lands.

E. coloratum, Muhl. Wet places; common.

E. lineare, Muhl. Bogs; common.

E. lineare, Muhl. var. *oliganthum*, Trelease. Bogs, deep in mountain woods, Stratton, *Grout*; North Pond, Sunderland, *Eggleston*.

E. strictum, Muhl. Cold bogs; occasional. "Narrow-leaved form, south end of Lake Willoughby," *E. Faxon*.

LUDWIGIA

L. palustris, Ell. (*Nardia palustris*, L.) Ditches and swamps; common.

ŒNOTHERA. EVENING PRIMROSE

Œ. biennis, L. (*Onagra biennis*, Scop.) Dry soil; common.

Œ. cruciata, Nutt. (*Œ. biennis*, L. var. *cruciata*, Torr. & Gray.) Brattleboro and Vernon, *Grout*.

Œ. pumila, L. (*Kneiffia pumila*, Spach.) Fields; common.

HALORAGAEAE

CALLITRICHE

C. autumnalis, L. (*C. bifida*, Morong.) Kelly's Bay, Alburgh, *Pringle*.

C. palustris, L. (*C. verna*, L.) Cold or running water; frequent.

HIPURIS. MARE'S TAIL

H. vulgaris, L. Rare ; in cold springy margin of Joe's Pond, West Danville, Blanchard.

MYRIOPHYLLUM. WATER MILFOIL

M. alterniflorum, DC. "Gut," Lake Champlain, Pringle and Brainerd.

M. ambiguum, Nutt. (*M. humile*, Morong.) West River, West Townshend, Grout.

M. Farwellii, Morong. Mountain ponds. Belden's Pond, Johnson ; Townshend, Grout ; Spectacle Pond, Wallingford ; North Pond, Brunswick ; Little Averill Pond, Eggleston.

M. spicatum, L. In deep water ; common.

M. tenellum, Bigelow. Borders of ponds. Grand Isle, Pringle ; Joe's Pond, West Danville, Blanchard ; Fairlee Lake, Jesup and Sargent.

PROSERPINACA

P. palustris, L. Swamps ; occasional.

ARALIACEAE. GINSENG FAMILY,

ARALIA. WILD SARSAPARILLA

A. hispida, Vent. Bristly Sarsaparilla. Rocky or sandy woodlands ; frequent.

A. nudicaulis, L. Sarsaparilla. Moist woodlands ; common.

A. quinquefolia, Decsne. & Planch. (*Panax quinquefolium*, L.) Ginseng. Rich woods ; formerly common, now rapidly disappearing.

A. racemosa, L. Spikenard. Rich woodlands ; frequent.

A. trifolia, Decsne. & Planch. (*Panax trifolium*, L.) Ground-nut. Moist woods and thickets ; common.

UMBELLIFERAE. PARSLEY FAMILY

ANGELICA

A. atropurpurea, L. Swamps and moist grounds ; frequent.

CARUM

C. CARUI, L. Caraway. About dwellings and roadsides ; frequent.

CICUTA

C. bulbifera, L. Water Hemlock. Swamps ; common.

C. maculata, L. Spotted Cowbane. Low grounds ; frequent.

CONIOSELINUM

- C. Canadense**, Torr. and Gray. (C. Chinense, B. S. P.) Swamps and cold cliffs; occasional.

CONIUM

- C. MACULATUM**, L. Poison Hemlock. Waste places; occasional.

CRYPTOTÆNIA

- C. Canadensis**, DC. (Deringa Canadensis, Kuntze.) Moist woods; common.

DAUCUS. CARROT

- D. CAROTA**, L. Wild Carrot. Old meadows; common.

HERACLEUM

- H. lanatum**, Michx. Cow Parsnip. Cold moist ground; frequent.

HYDROCOTYLE

- H. Americana**, L. Wet places; common.

LEVISTICUM

- L. OFFICINALE**, Koch. Lovage. Occasionally adventive.

OSMORRHIZA (WASHINGTONIA) SWEET CICELY

- O. brevistylis**, DC. (W. Claytoni, Britton) Rich woods; common.
O. longistylis, DC. Moist rich woods; occasional.

PASTINACA

- P. SATIVA**, L. Wild Parsnip. Roadsides and waste places; common.

PIMPINELLA

- P. integerrima**, A. Gray. Rocky shores of Lake Champlain; occasional.

SANICULA,¹ BLACK SNAKEROOT

- S. Canadensis**, L. Shaded ledges; frequent.
S. gregaria, Bicknell. Moist rich soil; frequent.
S. Marylandica, L. Moist woods; common.
S. trifoliata, Bicknell. Rich woods; frequent.

¹ See E. Brainerd. The Saniculas of Western Vermont. *Rhodora*. 1 : 7. 1899.

SIUM

- S. cicutaefolium*, Gmelin. Water Parsnip. Wet places ; frequent.

ZIZIA

- Z. aurea*, Koch. Moist meadows ; common.

CORNACEAE. DOGWOOD FAMILY

CORNUS. CORNEL. DOGWOOD

- C. alternifolia*, L. f. Open woods ; common.
C. Canadensis, L. Bunch-berry. Cold damp woods ; common.
C. circinata, L'Her. Round-leaved Cornel. Rocky woodlands ; frequent.
C. florida, L. Flowering Dogwood. Dry woods. "Castleton," *Robbins* ; Springfield, *S. Hayward* ; Newfane and Dorset, *S. Grout* ; North Pownal, *Eggleston*.
C. paniculata, L'Her. (*C. candidissima*, Marsh.) Rich thickets and banks ; frequent.
C. sericea, L. (*C. Amonum*, Mill.) Kinnikinnik. Silky Cornel. Low woods and banks ; common.
C. stolonifera, Michx. Red-osier Dogwood. Wet places ; common.

NYSSA

- N. sylvatica*, Marsh. Sour Gum. Tupelo. Rich soil, generally swampy. "Craftsbury," *Robbins* ; East Dorset, *S. Grout* ; Vernon, *Grout* ; Burlington, *Mrs. Flynn* ; Vergennes, *Miss Ruth Fisher*.

ERICACEAE. HEATH FAMILY

ANDROMEDA

- A. ligustrina*, Muhl. (*Xolisma ligustrina*, Britton.) Occasional in southern Vermont.
A. polifolia, L. Boggy margins of ponds ; frequent.

ARCTOSTAPHYLOS. BEARBERRY

- A. Uva-ursi*, Spreng. Cliffs and bare hills ; occasional.

CASSANDRA. (CHAMÆDAPHNE)

- C. calyculata*, Don. Leather Leaf. Bogs ; frequent.

CHIMAPHILA. PIPSISSEWA

- C. maculata*, Pursh. Prince's Pine. Dry woods. Newfane, *Grout*.
C. umbellata, Nutt. Dry woods ; common.

CHIOGENES

- C. serpyllifolia*, Salisb. Creeping Snowberry. Peat bogs and mossy woods ; frequent.

EPIGÆA

- E. repens*, L. Mayflower. Trailing Arbutus. Sandy or rocky woodlands ; common in certain areas.

GAULTHERIA

- G. procumbens*, L. Wintergreen. Cool woods ; common.

GAYLUSSACIA

- G. resinosa*, Torr. and Gray. Huckleberry. Sterile fields and thickets ; common.

KALMIA. LAUREL

- K. angustifolia*, L. Sheep Laurel. Sterile fields and peat bogs ; frequent.
K. glauca, Ait. Pale Laurel. Cold peat bogs ; occasional.
K. latifolia, L. Mountain Laurel. Rocky hills. "Rockingham," *Carey* ; Pownal, *Eggleston*. Common along banks of West River between Brattleboro and Newfane.

LEDUM

- L. Groenlandicum*, Oeder. (*L. latifolium*, Ait.) Labrador Tea. Cold bogs ; frequent.

MONESSES

- M. grandiflora*, Salisb. (*M. uniflora*, A. Gray.) Deep cold woods ; occasional.

MONOTROPA. INDIAN PIPE

- M. Hypopitys*, L. (*Hypopitys Hypopitys*, Small.) Rich dry woods ; occasional.
M. uniflora, L. Dark rich woods ; common.

PTEROSPORA

- P. Andromedea*, Nutt. Pine woods ; rare.

PYROLA

- P. chlorantha**, Swartz. Dry woods ; frequent.
- P. elliptica**, Nutt. Rich woods ; common.
- P. minor**, L. Smuggler's Notch, *Pringle*. Rare.
- P. rotundifolia**, L. Woodlands ; occasional.
- P. rotundifolia**, L. var. **uliginosa**, Gray. Sphagnum bogs. Bristol, *Pringle* ; Peacham, *Blanchard* ; Rutland, *Ross* ; Chittenden, *Eggleston* ; Burlington, *Mrs. Flynn*.
- P. secunda**, L. Rich woods ; frequent.
- P. secunda**, L. var. **pumila**, Gray. Peat bogs. Bristol Pond bog, *Pringle* ; Sutton and Newark, *E. Faxon* ; cedar swamp, Fairhaven, *Eggleston*.

RHODODENDRON

- R. canescens**, G. Don. (*R. nudiflora*, of Gray Manual in part, *Azalea canescens*, Michx.) Swamp Pink. Woody banks and borders of swamps ; occasional.
- R. maximum**, L. Rocky woods bordering Groton Pond, *Perkins* ; "Peacham," *Blanchard* ; Martin's and Niggerhead Ponds, *Eggleston* ; Lanesboro, *Miss M. Skinner*.
- R. Rhodora**, Don. (*Rhodora Canadensis*, L.) "Brattleboro," *Robbins* ; Burlington, *Perkins* ; Derby, Richmond, *Horsford* ; Johnson, *Grout* ; abundant in Essex County, *Eggleston*.

VACCINIUM. BLUEBERRY. CRANBERRY

- V. caespitosum**, Michx. Mt. Mansfield Chin, *Pringle* ; rocky shore West River, Newfane, *Grout*.
- V. Canadense**, Kalm. Moist thickets ; common in the mountains. The market blueberry of Essex County.
- V. corymbosum**, L. Swamps and low thickets. The abundant blueberry about northern Lake Champlain. The form known as var. **amoenum**, Gray, occurs in swamps, Monkton, Charlotte, *Pringle*.
- V. corymbosum**, var. **atrococcum**, Gray. (*V. atrococcum*, Heller.) Black Blueberry. Bristol Pond bog, *A. C. Dyke*. Also reported from several other localities but the determinations have not been verified.
- V. macrocarpon**, Ait. Large Cranberry. (*Oxycoccus macrocarpus*, Pers.) Peat bogs ; frequent.
- V. Oxycoccus**, L. Small Cranberry. (*Oxycoccus Oxycoccus*, McM.) In cold peat bogs ; frequent.

- V. *Pennsylvanicum*, Lam. Dry hills ; common. The earliest market blueberry. Plant having black berries without bloom (? *V. nigrum*, Britton) are found ; West Rutland, *Eggleston*.
- V. *Pennsylvanicum*, Lam. var. *angustifolium*, Gray. Summit of Mt. Mansfield and Camel's Hump, *Robbins*, *Pringle*.
- V. *uliginosum*, L. Summit of Mt. Mansfield and Camel's Hump, *Robbins*, *Pringle* ; *Johnson*, *Grout*.
- V. *vacillans*, Solander. Dry woodlands ; common ; forming part of the later blueberries of the market.
- V. *Vitis-Idaea*, L. On the summits of Mansfield and Camel's Hump mountains, *Robbins*.

DIAPENSIACEAE

DIAPENSIA

- D. *Lapponica*, L. Mt. Mansfield Chin, *Pringle*.

PRIMULACEAE. PRIMROSE FAMILY

LYSIMACHIA. LOOSESTRIFE

- L. *NUMMULARIA*, L. Moneywort. Frequent as a troublesome weed in lawns.
- L. *producta*, Fernald. (*Rhodora*, 1:134. 1899.) (*L. stricta*, var. *producta*, Gray.) Mouth of the Winooski River, *Eggleston* and *Jones*.
- L. *quadrifolia*, L. Dry thickets ; common.
- L. *stricta*, Ait. (*L. terrestris*, B. S. P.) Low ground ; common.
- L. *thyrsiflora*, L. (*Naumbergia thyrsiflora*, Duby.) Bogs and swamps ; frequent.

PRIMULA

- P. *Mistassinica*, Michx. Willoughby Mountain, *A. Wood* ; Smuggler's Notch, *Morong*.

SAMOLUS

- S. *Valerandi*, L. var. *Americanus*, Gray. (*S. floribundus*, H. B. K.) Along sluggish brooks ; Middlebury, *James*, *C. N. Brainerd* ; "Brattleboro," *Frost*.

STEIRONEMA

- S. *ciliatum*, Raf. Moist thickets ; common.
- S. *lanceolatum*, Gray. Low grounds along northern Lake Champlain ; occasional.

TRIENTALIS

T. Americana, Pursh. Star Flower. Moist woods and thickets; common.

OLEACEAE. OLIVE FAMILY

FRAXINUS. ASH

- F. Americana**, L. White Ash. Rich woods; common.
- F. Pennsylvanica**, Marsh. (*F. pubescens*, Lam.) Red Ash. Low grounds; common along Lake Champlain and its tributaries.
- F. nigra**, Marsh. (*F. sambucifolia*, Lam.) Black Ash. Swamps and wet woods; common.
- F. lanceolata**, Bork. (*F. viridis*, Michx. f.) Green Ash. Occasional along shores of Lake Champlain.

GENTIANACEAE. GENTIAN FAMILY

BARTONIA

- B. tenella**, Muhl. (*B. Virginica* B. S. P.) "Rockingham," *Carey*; Higbee swamp, Burlington, *Jones*.

GENTIANA. GENTIAN

- G. Amarella**, L., var. *acuta*, Hook. f. (*G. acuta*. Michx.) Smuggler's Notch, *Pringle*.
- G. Andrewsii**, Griseb. Closed Gentian. Moist grounds; frequent.
- G. crinita**, Froel. Fringed Gentian. Moist ground; frequent in the southern part of the State.
- G. linearis**, Froel. Bogs and meadows in the mountains; occasional. A broad leaved form from Stowe, *Mrs. Straw*, appears to be var. *lanceolata*, Gray.
- G. quinqueflora**, Lam. (*G. quinquefolia*, L.) Moist hills; occasional.

HALENIA. (TETRAGONANTHUS)

- H. deflexa**, Griseb. Banks of Lewis Creek. Charlotte, *Horsford* and *Pringle*.

LIMNANTHEMUM

- L. lacunosum**, Griseb. Shallow water; Spectacle Pond, East Wallingford, *Kent*; Springfield, *Eggleston*; common in Windham county; *Grout*.

MENYANTHES

- M. trifoliata**, L. Buck Bean. Sphagnum bogs; occasional.

APOCYNACEAE. DOGBANE FAMILY

APOCYNUM. DOGBANE

- A. androsaemifolium**, L. Thickets and fields ; common.
- A. cannabinum**, L. Indian Hemp. Moist banks ; occasional.
- A. cannabinum**, L. var. **glaberrimum**, DC. Shores of Lake Champlain. Sands of West River, *Eggleston*.

VINCA

- V. MINOR**, L. Periwinkle. Persisting in neglected dooryards.

ASCLEPIADACEAE. MILKWEED FAMILY

ASCLEPIAS. MILKWEED

- A. incarnata**, L. Marshes ; common.
- A. obtusifolia**, Michx. Sandy soil ; frequent about Burlington.
- A. physaloides**, Pursh. (*A. exaltata*, Muhl.) Moist copses ; occasional.
- A. quadrifolia**, L. Rocky woods ; occasional.
- A. Syriaca**, L. (*A. Cornuti*, Decaisne.) Rich grounds ; common.
- A. tuberosa**, L. Butterfly Weed. Dry fields ; Pownal." *Robbins* ; "Bel-lows Falls," *Carey* ; Vernon, *Grout* ; Manchester, *Miss Day*.

VINCETOXICUM. (CYNANCHUM)

- V. NIGRUM**, Moench. Brattleboro, *Frost* ; Windsor, *Leland*.

CONVOLVULACEAE. MORNING-GLORY FAMILY

CONVOLVULUS. BINDWEED

- C. ARVENSIS**, L. A garden weed ; Woodstock, *F. B. Dana*.
- C. JAPONICUS**, Thunb. The double-flowered form, an occasional escape from cultivation.
- C. sepium**, L. Moist thickets ; common.
- C. sepium**, L. var. **Americanus**, Sims. Common in the gravelly soil along shores of Lake Champlain.
- C. spithameus**, L. Dry sandy plains ; common about Burlington. Nor-wich and Rutland, *Eggleston*.

CUSCUTA. DODDER

- C. EPITHYMUM**, Murr. In clover fields ; threatening to become troublesome.
- C. Gronovii**, Willd. Moist thickets ; common.

POLEMONIACEAE. PHLOX FAMILY

PHLOX

- P. paniculata**, L. Escaped from cultivation ; Rutland, *Eggleston* ; Franklin, *Wild*.

POLEMONIUM

- P. Van Bruntiae**, Britton. (*P. caeruleum*, of Gray Manual.) Abby Pond, Ripton, *Brainerd*.

HYDROPHYLLACEAE

HYDROPHYLLUM

- H. Virginicum**, L. Rich woods ; common.

BORRAGINACEAE

CYNOGLOSSUM

- C. OFFICINALE**, L. Hound's-tongue. Pastures ; frequent.
C. Virginicum, L. Wild Comfrey. Rich woods ; occasional.

ECHINOSPERMUM. (LAPPULA)

- E. LAPPULA**, Lehm. Gravelly shores of Lake Champlain ; frequent.
E. Virginicum, Lehm. (*L. Virginiana*, Greene.) Beggar's Lice. Borders of woods ; frequent.

ECHIUM. VIPER'S BUGLOSS

- E. VULGARE**, L. Blueweed. Pastures and moist soil. Becoming increasingly troublesome as a weed.

LITHOSPERMUM. GROMWELL

- L. ARVENSE**, L. Old fields and roadsides ; occasional.
L. OFFICINALE, L. Dry pastures ; common.

MYOSOTIS

- M. laxa**, Lehm. Cold brooks. Peacham, *Blanchard* ; abundant in White River valley, *Eggleston*.
M. PALUSTRIS, Withering. Forget-me-not. Frequently naturalized along cold brooks.

- M. vernia**, Nutt. (*M. Virginica*, B. S. P.) Dry banks and ledges. "Brattleboro," *Frost*; Windsor, *Leland*; Snake Mountain, *Brainerd*; Fairlee Cliffs and West Castleton, *Eggleston*.

SYMPHYTUM

- S. OFFICINALE**, L. Comfrey. Moist places; adventive.

VERBENACEAE. VERVAIN FAMILY

PHRYMA

- P. Leptostachya**, L. Moist open woods; frequent.

VERBENA. VERVAIN

- V. hastata**, L. Blue Vervain. Roadsides; common.
V. urticaefolia, L. White Vervain. Roadsides; common.

LABIATAE. MINT FAMILY

BLEPHILIA

- B. ciliata**, Raf. Dry open places. East Dorset, *S. Grout*; Manchester, *Miss Day*.
B. hirsuta, Benth. Moist shady places; occasional.
B. hirsuta, Benth. var. *glabrata*, Fernald. (*Rhodora* I:221. 1899.) Dry soil. Manchester, *Miss Day*.

CALAMINTHA.

- C. Clinopodium**, Benth. (*Clinopodium vulgare*, L.) Borders of thickets and fields; frequent.

COLLINSONIA

- C. Canadensis**, L. Rich moist woods of southern and central Vermont; occasional.

GALEOPSIS

- G. Tetrahit**, L. Hemp Nettle. Waste places; common.

HEDEOMA

- H. pulegioides**, Pers. Pennyroyal. Dry fields; common.

HYSSOPUS

- H. OFFICINALIS**, L. Hyssop. Roadsides. Grand Isle, *Pringle*; South Wal-
 lingford, *Ross*; Peacham, *Blanchard*.

ISANTHUS

- I. caeruleus**, Michx. (*I. brachiatus*, B. S. P.) Dry sterile fields ; rare.

LAMIUM. DEAD NETTLE

- L. AMPLEXICAULE**, L. Garden weed. Bristol, *Pringle* ; Rutland, *Eggleston*.
L. MACULATUM, L. Garden escape. Bristol, *Pringle* ; Middlebury, *Brainerd*.

LEONURUS

- L. CARDIACA**, L. Motherwort. Waste places ; common.

LOPHANTHUS. (AGASTACHE)

- L. nepetoides**, Benth. Thickets and along fences. Middlebury, *James*, *Brainerd* ; Pownal, Bennington, Arlington, *Robbins*.
L. scrophulariaefolius, Benth. Thickets and fencerows ; occasional.
L. scrophulariaefolius, Benth. var. *mollis*, Fernald. (*Rhodora* I : 220. 1899.) Manchester, *Miss Day*.

LYCOPUS

- L. Americanus**, Muhl. (*L. sinuatus*, Ell.) Moist soil ; common.
L. Virginicus, L. Shady moist places ; common.

MARRUBIUM

- M. VULGARE**, L. Horehound. Garden escape. Peacham, *Blanchard*.

MENTHA. MINT

- M. Canadensis**, L. Wet places ; common.
M. PIPERITA, L. Peppermint. Along brooks ; frequent.
M. SATIVA, L. Garden escape. Rochester and Rutland, *Eggleston* ; Johnson, *Grout*.
M. VIRIDIS, L. Spearmint. Moist places ; common.

MONARDA

- M. didyma**, L. Oswego Tea. Warren, *Brainerd* ; Barnet, *Blanchard*.
M. fistulosa, L. Wild Bergamot. Dry open woods ; occasional.
M. fistulosa, L. var. *rubra*, Gray. (*M. media*, Willd.) Garden escape. Stowe, *Eggleston*.
M. punctata, L. Colchester, *Mrs. Flynn*. Doubtless introduced with western seed.

NEPETA

- N. CATARIA**, L. Catnip. Dry pastures ; common.
- N. GLECHOMA**, Benth. (*Glechoma hederacea*, L.) Ground Ivy. Moist shady places ; common.

ORIGANUM

- O. VULGARE**, L. Wild Marjoram. Moist shady ground ; occasional.

PHYSOSTEGIA

- P. Virginiana**, Benth. Gravelly shores of Lake Champlain ; occasional.

PRUNELLA. (BRUNELLA)

- P. vulgaris**, L. Self-heal. Woods and fields ; common. Plants with white flowers occur occasionally.

PYCNANTHEMUM. (KOELLIA)

- P. incanum**, Michx. Rocky woods. Cavendish, *Macrae* ; Bartlettboro and North Pownal, *Eggleston*.
- P. lanceolatum**, Pursh. (*K. Virginiana*, MacM.) Dry woods ; southern and western Vermont ; occasional.
- P. linifolium**, Pursh. (*K. flexuosa*, MacM.) Dry fields of western Vermont ; occasional.
- P. muticum**, Pers. Fields ; occasional.
- P. verticillatum**, Pers. (*P. muticum*, Gray in part, not Pers. See Bot. Gaz. 28: 132. 1899.) Moist fields ; occasional in western Vermont.

SATUREIA

- S. HORTENSIS**, L. Summer Savory. Gravelly bank. Outlet of Dorset Pond, *Grout*.

SCUTELLARIA. SKULLCAP

- S. galericulata**, L. Wet shady places ; common.
- S. lateriflora**, L. Mad-dog Skullcap. Wet shady places ; common.
- S. parvula**, Michx. Dry banks and headlands of Lake Champlain ; local.

STACHYS. HEDGE NETTLE

- S. aspera**, Michx. Moist ground ; occasional.
- S. palustris**, L. Meadow, East Wallingford, *E. C. Kent*. Specimen in Mr. Kent's herbarium.

TEUCRIUM. GERMANDER

- T. Canadense**, L. Low grounds ; occasional. Frequent along the shores of Lake Champlain.

THYMUS. THYME

- T. SERPYLLUM**, L. Peacham, *Blanchard*; Rock Point, Burlington, *Mrs. Flynn*; West Berkshire, *Wild*.

TRICHOSTEMA

- T. dichotomum**, L. Dry sterile fields; occasional.

SOLANACEAE. NIGHTSHADE FAMILY

DATURA. JAMESTOWN WEED

- D. STRAMONIUM**, L. Occasional in waste places.
D. TATULA, L. Rare and adventive.

HYOSCYAMUS

- H. NIGER**, L. Henbane. Roadsides. "Panton," *Burge*; "Mt. Independence," *Dr. Hill*; Shoreham, *Brainerd*.

LEUCOPHYSALIS

- L. grandiflora**, Rydberg. (*Physalis grandiflora*, Hook.) Providence Island, *Perkins*; Stave Island, *Mrs. Flynn*.

NICANDRA. (PHYSALODES)

- N. PHYSALOIDES**, Gaertn. Thetford and Peacham, *Blanchard*; Shoreham, *Brainerd*.

PHYSALIS. GROUND CHERRY

- P. heterophylla**, Nees. (*P. Virginiana* of the Gray Manual.) Manchester, *Miss Day*.
P. heterophylla, Nees. var. *ambigua*, Rydberg. Sandy soil and gardens; occasional.
P. pruinosa, L. (*P. pubescens*, Am. authors in part.) Rutland, *Eggleston*; Pittsford, *G. A. Woolson*; Middlebury, *Brainerd*.
P. Virginiana, Mill. Highgate, *Jesup*; St. Johnsbury, *Mrs. M. H. Buckham*.

SOLANUM. NIGHTSHADE

- S. DULCAMARA**, L. Moist thickets; frequent.
S. nigrum, L. Moist shaded ground; frequent.

SCROPHULARIACEAE. FIGWORT FAMILY

CASTILLEJA

- C. pallida*, Kunth, var. *septentrionalis*, Gray. (*Castilleja acuminata*, Spreng.) Mt. Mansfield, *Tuckerman* and *Macrae*; Smuggler's Notch, *Pringle*.

CHELONE

- C. glabra*, L. Turtle-head. Moist soil; common.

GERARDIA

- G. flava*, L. (*Dasystoma flava*, Wood.) Pownal, *Andrews*.
G. pedicularia, L. (*Dasystoma pedicularia*, Britton.) "Pownal," *Robbins*; "Bellows Falls," *Carey*; Fairlee Cliffs, *Sargent*; Lake Dunmore, *Brainerd*.
G. purpurea, L. var. *paupercula*, Gray. (*G. paupercula*, Britton.) Knight's and Butler's Islands, *Brainerd*; Highgate, *Wild*.
G. quercifolia, Pursh. (*Dasystoma Virginica*, Britton.) Dry open woods; Fairlee Cliffs, *Sargent*; Castleton, Pownal, *Robbins*, *Eggleston*; West Rutland, *Eggleston*; North Dorset, *Mrs. Flynn*.
G. tenuifolia, Vahl. Dry open woods; Pownal, *Robbins*, *Eggleston*; "Brattleboro," *Robbins*; "Bellows Falls," *Carey*; Vernon, *Grout*; Colchester, *Mrs. Flynn*.

GRATIOLA

- G. aurea*, Muhl. Sandy shores of Lake Champlain; rare.
G. Virginiana, L. Wet shores and ditches; occasional.

ILYSANTHES

- I. attenuata*, Small. Wet shores and ditches; occasional.

LINARIA. TOAD-FLAX

- L. Canadensis*, Dumont. Dry soil; "Bellows Falls," *Carey*; Vernon, *Grout*.
L. vulgaris, Mill. Butter and Eggs. (*Linaria Linaria*, Karst.) Fields; common.

MELAMPYRUM

- M. Americanum*, Michx. (*M. lineare*, Lam.) Cow-wheat. Dry woodlands; frequent.

MIMULUS

- M. moschatus*, Dougl. Musk-plant. Garden escape; wet places. Wallingford, *Kent*; Wardsboro, *Howe*; Weston, *Mrs. Flynn*.
M. ringens, L. Monkey-flower. Wet places; common.

PEDICULARIS

P. Canadensis, L. Lousewort. Thickets ; common.

PENTSTEMON

P. laevigatus, Solander. Fields, Franklin, *Wild.*

P. pubescens, Solander. Rocky hills ; frequent in western Vermont.

SCROPHULARIA. FIGWORT

S. leporella, Bicknell. Meadows and fence rows ; occasional.

S. nodosa, L. var. **Marilandica**, Gray. (*S. Marilandica*, L.) Waste places ; occasional.

VERBASCUM

V. BLATTARIA, L. Moth Mullein. Clay or rocky pastures and roadsides ; occasional.

V. THAPSUS, L. Mullein. Fields ; common.

VERONICA. SPEEDWELL

V. Americana, Schweinitz. Wet ground ; common.

V. Anagallis, L. "Middlebury," *Burge* ; Tinmouth Creek, Tinmouth, *Eggleston*.

V. ARVENSIS, L. Fields ; occasional.

V. BUXBAUMII, Tenore. (*V. Byzantina*, B. S. P.) Occasionally adventive.

V. officinalis, L. Dry fields and thickets ; frequent.

V. peregrina, L. Gardens and waste places ; occasional.

V. scutellata, L. Wet ground ; common.

V. serpyllifolia, L. Roadsides and fields ; common.

LENTIBULARIACEAE. BLADDERWORT FAMILY

PINGUICULA

P. vulgaris, L. Butterwort. Alpine cliffs, Smuggler's Notch, *Pringle*.

UTRICULARIA. BLADDERWORT

U. cornuta, Michx. Bogs ; frequent.

U. gibba, L. Rocky pond, Rutland, *Ross*.

U. inflata, Walt. In still water ; occasional.

U. intermedia, Hayne. Shallow pools ; occasional.

- U. purpurea*, Walt. East Barnet, West Danville, Peacham, *Blanchard*.
U. resupinata, B. D. Greene. Fairlee Lake, *Sargent* and *Jesup*.
U. vulgaris, L. Ponds and slow streams; common.

OROBANCHACEAE. BROOMRAPE FAMILY

CONOPHOLIS

- C. Americana*, Wallroth. Woods on White Creek, *Chandler*; "Rock Point, Burlington," *Macrae*; West Rutland, *H. M. Denslow*; Snake Mountain, *Brainerd*.

EPIPHEGUS. BEECH-DROPS

- E. Virginiana*, Bart. (*Leptamnium Virginianum*, Raf.) Under beech trees; common.

OROBANCHE

- O. uniflora*, L. (*Aphyllon uniflorum*, Gray; *Thalesia uniflora*, Britton.) Dry woodlands; occasional.

ACANTHACEAE

DIANTHERA

- D. Americana*, L. Collected by Dr. Paddock, in 1819, in water at Ferrisburgh; specimen now in University of Vermont herbarium. No later botanist has found it in Vermont.

PLANTAGINACEAE. PLANTAIN FAMILY

LITTORELLA

- L. lacustris*, L. (*L. uniflora*, Rusby.) Gravelly shores. Kelley's Bay, Alburgh, *Pringle*; Spectacle Pond, East Wallingford, *Kent*; Notch Pond, Ferdinand, *Eggleston*.

PLANTAGO. PLANTAIN

- P. aristata*, Michx. (*P. Patagonica*, Jacq. var. *aristata*, Gray.) Occasionally introduced with grass seed. Brookline, *Howe*; East Wallingford, *Kent*; Colchester, *Mrs. Flynn*.
P. lanceolata, L. English Plantain. Grass land; common.
P. major, L. Waysides; common.
P. rugelii, Decaisne. With the preceding species; common.

RUBIACEAE. MADDER FAMILY

CEPHALANTHUS

C. occidentalis, L. Button-bush. Swamps; frequent.

GALIUM. BED STRAW. CLEAVERS

G. Aparine, L. Shaded ground; frequent.

G. asprellum, Michx. Alluvial ground; common.

G. circaezans, Michx. Rich woods; common.

G. Claytoni, Michx. Wet meadows; frequent.

G. Kamtschaticum, Steller. Cold wet woods of the higher mountains; frequent.

G. lanceolatum, Torr. Dry woods; frequent.

G. MOLLUGO, L. Peacham, *Blanchard*; "North Pomfret," *Morgan*.

G. palustre, L. Wet meadows and along ditches; common.

G. pilosum, Ait. Dry copses. Pownal, *Robbins*, *Eggleston*.

G. SYLVESTRE, Pollick. Adventive. Charlotte, *Pringle*.

G. tinctorium, L. (*G. trifidum*, L. var. *latifolium*, Torr.) Wet meadows; frequent.

G. tinctorium, L. var. *Labradoricum*, Wiegand. Perch Pond bog, Pownal, *J. R. Churchill*.

G. trifidum, L. (*G. trifidum*, L. var. *pusillum*, Gray.) Cold bogs and marshy borders of ponds; frequent.

G. triflorum, Michx. Rich woodlands; common.

G. VERUM, L. Yellow Bedstraw. Occasionally introduced in grass lands.

HOUSTONIA

H. caerulea, L. Bluets. Grassy places and wet rocks; common.

H. purpurea, L. var. *longifolia*, Gray. (*H. longifolia*, Gaertn.) Dry rocky places; frequent in the Champlain valley. Randolph, *Bates*.

MITCHELLA

M. repens, L. Partridge-berry. Cool woods; common.

CAPRIFOLIACEAE. HONEYSUCKLE FAMILY

DIERVILLA

D. trifida, Moench. (*D. Diervilla*, McM.) Rocky woodlands; common.

LINNÆA

L. borealis, L. Twin-flower. Cool, rich woods; frequent.

LONICERA. HONEYSUCKLE

- L. caerulea*, L. Cold bogs of northeastern Vermont ; occasional.
L. ciliata, Muhl. Fly Honeysuckle. Moist woods ; common.
L. dioica, L. (*L. glauca*, Hill.) Dry rocky woods ; frequent.
L. hirsuta, Eaton. Rocky woodlands of western Vermont ; occasional.
L. oblongifolia, Muhl. Cold bogs ; "Brattleboro," *Frost* ; Bristol, Monkton, New Haven, Starksboro, *Pringle* ; Sutton, *E. Faxon*.
L. TATARICA, L. Tartarian Honeysuckle. Common in cultivation ; a frequent escape in thickets about Burlington.

SAMBUCUS. ELDER

- S. Canadensis*, L. Elderberry. Thickets ; common.
S. racemosa, L. Red Elder, (*S. pubens*, Michx.) Rocky woodlands : common.

SYMPHORICARPOS

- S. racemosus*, Michx. Snowberry. Common in cultivation ; occasionally spreading from old gardens.
S. racemosus, Michx. var. *pauciflorus*, Robbins. (*S. pauciflorus*, Britton.) Cliffs and headlands of western Vermont ; occasional.

TRIOSTEUM

- T. perfoliatum*, L. Rich woodlands ; occasional.

VIBURNUM. ARROW-WOOD

- V. acerifolium*, L. Maple-leaf Viburnum. Dry rocky woods ; common.
V. alnifolia, Marsh. (*V. lantanoides*, Michx.) Hobblebush. Cold moist woods ; common.
V. cassinoides, L. Swamps ; common.
V. dentatum, L. Arrow-wood. Wet places ; frequent.
V. Lentago, L. Sheepberry. Rich moist woods and banks ; frequent.
V. Opulus, L. Cranberry-tree. Low ground ; frequent.
V. pauciflorum, Pylaie. Moist ravines near limit of tree growth ; Mt. Mansfield, *Tuckerman* and *Macrae* ; Killington, *Sargent* and *Eggleston*.
V. pubescens, Pursh. Common on the cliffs and rocky hills of the Champlain valley.

VALERIANACEAE**VALERIANA. VALERIAN**

- V. OFFICINALIS**, L. Garden escape. Franklin, *L. Wild*; Burlington, *Mrs. Flynn*.
V. sylvatica, Banks. Cedar swamp, Fairhaven, *Robbins, Seely*; Craftsbury, *Robbins*.

DIPSACEAE. TEASEL FAMILY**DIPSACUS**

- D. SYLVESTRIS**, Mill. Wild Teasel. Roadside weed. "Castleton," *Reed*; Shoreham, *Brainerd*; Charlotte, *Pringle*.

SCABIOSA

- S. ARVENSIS**, L. Scabious. Adventive. Charlotte, *Pringle*.

CUCURBITACEAE. GOURD FAMILY**ECHINOCYSTIS**

- E. lobata**, Torr. & Gray. (*Micrampelis lobata*, Greene.) Wild Cucumber. Alluvial banks and waste places; frequent.

SICYOS

- S. angulatus**, L. Star Cucumber. River banks and waste places; frequent.

CAMPANULACEAE. BELLFLOWER FAMILY**CAMPANULA. BELLFLOWER**

- C. aparinoides**, Pursh. Low sedgy thickets; rare.
C. RAPUNCULOIDES, L. Roadside escape; occasional.
C. rotundifolia, L. Harebell. Rocky banks; common.

SPECULARIA. (LEGOUZIA)

- S. perfoliata**, A. DC. Dry rocky woodlands; occasional and local.

LOBELIACEAE. LOBELIA FAMILY**LOBELIA**

- L. cardinalis**, L. Cardinal-flower. Swales and margins of ponds and streams; frequent.
L. Dortmanna, L. Shallow margins of ponds and bogs; occasional.
L. inflata, L. Fields and pastures; common.

L. Kalmii, L. Cool moist rocks and fields ; occasional.

L. spicata, Lam. Fields and waysides ; occasional.

COMPOSITAE. COMPOSITE FAMILY

ACHILLEA

A. Millefolium, L. Yarrow. Dry fields and roadsides ; common.

AMBROSIA. RAGWEED

A. artemisiaefolia, L. Roman Wormwood. Waste places ; common.

A. trifida, L. Moist alluvial soil ; occasional.

ANAPHALIS

A. margaritacea, Benth. and Hook. Pearly Everlasting. Dry hills and woods ; common.

ANTENNARIA. PLANTAIN-LEAVED EVERLASTING

A. Brainerdii, Fernald. (Rhodora I: 153. 1899.) Moist banks, usually in shade ; occasional.

A. Canadensis, Greene. Dry and moist ground ; common.

A. Canadensis, Greene, var. *Randii*, Fernald. With the type ; occasional.

A. fallax, Greene. In partial shade ; occasional.

A. fallax, Greene, var. (*A. Farwellii*, Fernald, Rhodora I: 152. 1899, not Greene.) Meadows and hillsides ; common in Addison county.

A. neglecta, Greene. Old fields ; common.

A. neodioica, Greene. Old pastures and fields ; frequent.

A. neodioica, Greene, var. *attenuata*, Fernald. Dry fields and pastures ; common.

A. neodioica, Greene, var. *grandis*, Fernald. Usually in shade ; frequent.

A. Parlinii, Fernald. Dry banks and thickets ; occasional.

A. Parlinii, Fernald, var. *arnoglossa*, Fernald. (*A. arnoglossa*, Greene.) Heavy soil ; frequent in Addison county.

A. petaloidea, Fernald. Old pastures ; common.

A. plantaginea, R. Br. (*A. plantaginifolia*, Hook.) Dry open woodlands ; occasional.

A. plantaginea, R. Br. var. *petiolata*, Fernald. Dry woodlands and hilltops ; occasional.

ANTHEMIS

- A. COTULA**, DC. Mayweed. Waste places ; common.

ARCTIUM. BURDOCK

- A. LAPPA**, L. (*A. Lappa*, L. var. *majus*, Gray.) Waste places ; frequent, especially in mountain towns.
- A. MINUS**, Bernh. (*A. Lappa*, L. var. *minus*, Gray.) Waste places ; common. A burdock with webbed heads, Manchester, *Miss Day*, represents the form known as var. *tomentosum*, Gray. M. L. Fernald says, however, that it is not the real *A. tomentosum* of Europe and is not to be separated from *A. minus*.

ARTEMISIA. WORMWOOD

- A. ABSINTHIUM**, L. Dry hills and roadsides ; occasional.
- A. biennis**, Willd. Introduced along railways ; occasional.
- A. Canadensis**, Michx. "Willoughby Lake," *A. Wood* ; Smuggler's Notch, *Pringle* ; slaty shore of northern Lake Champlain, *Brainerd*.
- A. caudata**, Michx. Sandy shores of Lake Champlain ; occasional.
- A. VULGARIS**, L. Waste places ; common.

ASTER

- A. acuminatus**, Michx. Cool rich woods ; common.
- A. amethystinus**, Nutt. Moist ground. "Brattleboro," *Frost* ; South Pownal, *Eggleston*.
- A. cordifolius**, L. Woodlands ; common.
- A. cordifolius**, L. var. *polycephalus*, Porter. Johnson, *Grout*.
- A. diffusus**, Ait. (*A. lateriflorus*, Britton.) Thickets and fields ; common.
- A. diffusus**, Ait. var. *hirsuticaulis*, Gray. (*A. hirsuticaulis*, Lindl.) Borders of thickets. "Bellows Falls," *Carey* ; "Burlington," *Macrae* ; Highgate Springs, *Jesup* ; Brattleboro, *Grout*.
- A. divaricatus**, L. (*A. corymbosus*, Ait.) Moist woodlands ; common.
- A. dumosus**, L. Thickets. Rutland, *Eggleston*.
- A. ericoides**, L. Dry open places, southern Vermont ; occasional.
- A. ericoides**, L. var. *Pringlei*, Gray. (*A. Pringlei*, Britton.) Slaty headlands and islands of Lake Champlain ; frequent. Manchester, *Miss Day*.
- A. junceus**, Ait. Peat bogs ; rare.
- A. laevis**, L. Borders of woodlands, southern Vermont ; frequent.
- A. linariifolius**, L. (*Ionactis linariifolius*, Greene.) Dry sandy soil ; occasional.

- A. macrophyllus*, L. Moist woods ; common.
- A. macrophyllus*, L. var. *excelsior*, Burgess. Ripton, *Brainerd*.
- A. macrophyllus*, L. var. *pinguifolius*, Burgess. Pownal, *Eggleston* ; Lake Dunmore, *Brainerd*.
- A. multiflorus*, Ait. Dry hilly pastures. Pownal, *Robbins*, *Eggleston* ; Vernon, *Grout*.
- A. multiflorus*, Ait. var. *exiguus*, Fernald. In railroad yard, Norwich, *Sargent*.
- A. nemoralis*, Ait. Rocky shores of North Pond, Brunswick, *Eggleston*.
- A. nemoralis*, Ait. var. *Blakei*, Porter. Belden Pond, Johnson, *Grout*.
- A. Novae-Angliae*, L. Moist ground ; common in western Vermont from Addison county southward, less so elsewhere. Forms with rose-purple rays, var. *roseus*, DC., and with white rays occur ; Bennington, *Eggleston*.
- A. Novi-Belgii*, L. Moist shady soil, Connecticut River valley ; occasional. A peculiar form occurs in Smuggler's Notch.
- A. paniculatus*, Lam. Shady moist soil ; common.
- A. paniculatus*, Lam. var. *bellidiflorus*, Burgess. Rutland, *Eggleston*.
- A. polyphyllus*, Willd. (*A. Faxoni*, Porter.) Willoughby Mountain, *Tuckerman*, *Faxon*. "A dwarf form in pastures, Newark and Sutton," *E. Faxon*.
- A. prenanthoides*, Muhl. Newfane, *Grout*.
- A. ptarmicoides*, Torr. and Gray. Dry limestone ledges, Bennington county ; occasional.
- A. puniceus*, L. Low thickets and swamps ; common.
- A. puniceus*, L. var. *firmus*, Torr. and Gray. (var. *laevicaulis*, Gray.) Sudbury, *F. W. Hubby*. Specimen in Gray herbarium.
- A. radula*, Ait. "Brattleboro," *Frost* ; Cranberry Pond bog, Ferdinand, *Eggleston*.
- A. sagittifolius*, Willd. Dry ground. Common in the Hoosic valley, Pownal, *Eggleston*.
- A. salicifolius*, Ait. Low grounds. North Pownal, rare, *Eggleston*.
- A. tardiflorus*, L. Moist shady ground. Newfane, *Grout* ; Rutland, Castleton, *Eggleston* ; Manchester, *Miss Day*.
- A. Tradescanti*, L. Low grounds ; common.
- A. umbellatus*, Mill. (*Doellingeria umbellata*, Nees.) Moist thickets ; common.
- A. undulatus*, L. Dry copses ; common.
- A. vimineus*, Lam. Moist banks ; frequent.

- A. vimineus**, Lam. var. **foliolosus**, Gray. Ledges. Sumner's Falls, Hartland, Eggleston.
- A. vimineus**, Lam. var. **saxatilis**, Fernald. Ledges, Winooski River. Williston, Pringle.

BIDENS. BUR MARIGOLD

- B. Beckii**, Torr. Ponds and deep slow streams ; occasional.
- B. cernua**, L. Wet places ; common.
- B. chrysanthemoides**, Michx. (*B. laevis*, B. S. P.) Wet grounds ; common.
- B. connata**, Muhl. Low margins of streams and lakes ; frequent.
- B. frondosa**, L. Beggar's Ticks. Moist waste places ; common.

CENTAUREA

- C. JACEA**, L. Adventive. Charlotte, Pringle.

CHRYSANTHEMUM

- C. LEUCANTHEMUM**, L. White Daisy. Fields and meadows ; common.

CICHORIUM

- C. INTYBUS**, L. Chicory. Roadsides and meadows ; common.

CNICUS. (CARDUUS.) THISTLE

- C. altissimus**, Willd. var. **discolor**, Gray. (*Carduus discolor*, Nutt.) Copses ; occasional.
- C. ARVENSIS**, Hoffm. Canada Thistle. Fields and waste places ; common.
- C. LANCEOLATUS**, Hoffm. Bull Thistle. Pastures and roadsides ; common.
- C. muticus**, Pursh. Swamp Thistle. Swamps and low woods ; frequent.
- C. pumilus**, Torr. (*Carduus odoratus*, Porter.) Pasture Thistle. The most common pasture thistle of the southern counties ; unknown north of Rutland county.

CREPIS

- C. BIENNIS**, L. Adventive. Charlotte, Pringle.

ERECHTITES

- E. hieracifolia**, Raf. Fireweed. Moist woods, especially in recent clearings ; common.

ERIGERON. FLEABANE

- E. annuus**, Pers. Daisy Fleabane. Fields and waste places ; common.
- E. bellidifolius**, Muhl. (*E. pulchellus*, Michx.) Copses and moist banks ; common.

- E. Canadensis*, L. (*Leptilon Canadense*, Britton.) Horsetweed. Waste places ; common.
- E. hyssopifolius*, Michx. Moist rocky river banks and mountain cliffs ; occasional.
- E. Philadelphicus*, L. Moist ground ; common.
- E. strigosus*, Muhl. (*E. ramosus*, B. S. P.) Fields ; common.

EUPATORIUM. THOROUGHWORT

- E. ageratoides*, L. Moist rich woods ; common.
- E. perfoliatum*, L. Boneset. Thoroughwort. Low grounds ; common.
- E. purpureum*, L. var. *amoenum*, Gray. Dry open woods. Pownal, *Eggleston*.
- E. purpureum*, L. var. *maculatum*,¹ Darl. (*E. maculatum*, L.) Joe-Pye Weed. Moist thickets and low grounds ; common.
- E. sessilifolium*, L. Dry open woods about base of cliff. North Pownal, *Eggleston*.

GALINSOGA

- G. parviflora*, Cav. "In waste heaps, Windsor," *Leland* ; Burlington, *Grout*. Becoming common as a garden weed. Most of the Burlington plants show spreading pubescence, var. *hispida*, DC.

GNAPHALIUM. EVERLASTING

- G. decurrens*, Ives. Hillsides ; common.
- G. polycephalum*, Michx. (*G. obtusifolium*, L.?) Old fields and woods ; common.
- G. uliginosum*, L. Cudweed. Moist soil ; common.

HELIANTHUS. SUNFLOWER

- H. annuus*, L. Sunflower. An occasional escape.
- H. decapetalus*, L. Copses and low banks of streams ; frequent.
- H. divaricatus*, L. Thickets and barrens ; frequent.
- H. giganteus*, L. "Brattleboro," *Frost* ; "Royalton," *Ward* ; Randolph, *Bates*.
- H. strumosus*, L. Dry woods and banks ; occasional.
- H. tuberosus*, L. Jerusalem Artichoke. Along fences and roadsides ; frequent.

¹ Probably the typical *Eupatorium purpureum* occurs in Vermont. Upon looking through the various herbaria, however, no Vermont specimens of it are found and it must therefore be omitted from this list. It should be sought for next season.

HELIOPSIS

H. scabra, Dunal. Franklin, *Wild*; Hartford and Norwich, *Sargent*.

HIERACIUM. HAWKWEED

H. aurantiacum, L. Orange Hawkweed. Common. A weed pest in pastures and lawns, especially in the northwestern counties.

H. Canadense, Michx. Dry cool woods; frequent.

H. paniculatum, L. Open woods; frequent.

H. scabrum, Michx. Dry open woods; common.

H. venosum, L. Dry plains and pine woods; occasional.

INULA

I. Helenium, L. Elecampane. Roadsides and damp pastures; frequent.

KRIGIA

K. Virginica, Willd. (*Adopogon Carolinianum*, Britton.) Dwarf Dandelion. Dry sterile soil; occasional.

LACTUCA. WILD LETTUCE

L. Canadensis, L. Rich damp soil, borders of fields and thickets; common.

L. hirsuta, Muhl. Charlotte, *Pringle*.

L. integrifolia, Bigel. Newfane, *Grout*; Pownal, *Eggleston*; Middlebury, *Brainerd*.

L. leucophaea, Gray. (*L. spicata*, Hitchcock.) Low grounds; common.

L. scariola, L. Prickly Lettuce. Waste places; Rutland, *Jones*; St. Albans, *Orton*; Burlington, *Mrs. Flynn*.

LAPSANA (LAMPSANA)

L. communis, L. Brattleboro, *Frost*.

LEONTODON

L. autumnalis, L. Fall Dandelion. Abundant on village green, Irasburgh, *T. E. Hazen*, *Wild*.

MATRICARIA

M. discoidea, DC. (*M. matricarioides*, Porter.) Adventive from Pacific coast. Abundant along railroad and highways, Pownal, *Eggleston*.

ONOPORDON

- O. ACANTHIUM**, L. Cotton Thistle. "Dry pastures, Williston and Grand Isle," *Robbins*; Charlotte, *Pringle*.

PETASITES

- P. palmata**, Gray. Sweet Coltsfoot. Wooded borders of cold swamps and streams; occasional. Fairhaven, *Robbins*; Charlotte, *Pringle*; Sutton, *Faxon*; Peacham, *Blanchard*.

PICRIS

- P. HIERACIOIDES**, L. Adventive from Europe. Charlotte, *Pringle*.

POLYMNIA

- P. Canadensis**, L. Limestone ledges, Rutland and Proctor, *Eggleston*.

PRENANTHES. (NABALUS.) RATTLESNAKE-ROOT

- P. alba**, L. Borders of rich woods; occasional.
- P. altissima**, L. Rich moist woods; common.
- P. altissima**, L. var. *hispidula*, Fernald, n. var. "Stem villous or hispid: leaves at least hispidulous on the veins beneath.—VERMONT, Monkton, Sept. 18, 1879, *C. G. Pringle*; MAINE, Augusta, Sept. 2, 1886, *E. C. Smith*; Woodstock, 1887, *J. C. Parlin*; MASSACHUSETTS, North Leominster, Sept., 1891, *Miss L. E. Shedd*."
- P. Boottii**, Gray. Mansfield Chin and Nose; *Pringle*.
- P. trifoliolata**, Fernald, in herb. (*Nabalus trifoliolatus*, Cass; *P. Serpentaria*, Gray, in part, not Pursh.) Lion's-foot. Dry sterile soil; frequent.

RUDBECKIA. CONE-FLOWER

- R. hirta**, L. Yellow Daisy. Meadows; common.
- R. laciniata**, L. Low thickets; frequent.

SENECIO. GROUNDSEL

- S. aureus**, L. Golden Ragwort. Swamps; common.
- S. Balsamitae**, Muhl. (*S. aureus*, L. var. *Balsamitae*, Torr. and Gray.) Moist cliffs and rocky banks of streams; frequent.
- S. obovatus**, Muhl. (*S. aureus*, L. var. *obovatus*, Torr. and Gray.) Dry open woods. Bennington and Pownal, common, *Robbins*, *Churchill*.
- S. Robbinsii**, Oakes. Common in the cold swamps of northern and central Vermont.
- S. VULGARIS**, L. Garden weed; occasional.

SERICOCARPUS

- S. conyzoides*, Nees. (*S. asteroides*, B. S. P.) Dry open woods. Pownal and Arlington, *Robbins*; Vernon, *Grout*.

SOLIDAGO. GOLDENROD

- S. arguta*, Ait. Copses and moist woods; common.
- S. bicolor*, L. Dry copses; common.
- S. bicolor*, L. var. *concolor*, Torr. and Gray. (*S. hispida*, Muhl.) Dry shady cliffs and sterile soil; occasional.
- S. caesia*, L. Rich woodlands; common.
- S. Canadensis*, L. Borders of thickets and fields; common.
- S. Canadensis*, L. var. *glabrata*, Porter. Perch Pond bog, Pownal, *Churchill* and *Eggleston*.
- S. Canadensis*, L. var. *procera*, Torr. and Gray. Manchester, *Miss Day*.
- S. Canadensis*, L. var. *scabra*, Torr. and Gray. Rutland, *Eggleston*.
- S. humilis*, Pursh. (*S. Purshii*, Porter.) Rocky banks of lakes and streams; occasional. Winooski Gorge, near Burlington, is the station of Pursh's type.
- S. juncea*, Ait. Copses and banks; common.
- S. lanceolata*, L. (*Euthamia graminifolia*, Nutt.) Moist soil; common.
- S. latifolia*, L. (*S. flexicaulis*, L.) Moist shaded banks; frequent.
- S. macrophylla*, Pursh. Highest peaks of Green Mountains; common above 3000 feet.
- S. neglecta*, Torr. and Gray. Bogs and swamps; occasional.
- S. nemoralis*, Ait. Dry sterile fields; common.
- S. patula*, Muhl. Swamps; frequent in Bennington county.
- S. puberula*, Nutt. Sandy soil; occasional.
- S. rugosa*, Mill. Borders of fields and copses; common.
- S. serotina*, Ait. Copses and fencerows; common.
- S. serotina*, Ait. var. *gigantea*, Gray. Low grounds and moist thickets; frequent.
- S. squarrosa*, Muhl. Rocky woods; occasional.
- S. uliginosa*, Nutt. Peat bogs; occasional.
- S. ulmifolia*, Muhl. About base of cliffs. North Pownal, *Eggleston*.
- S. Virgaurea*, L. Shady cliffs along the quartzite range of the Green Mountains at altitude of 1000-2000 feet. In the cliffs of Mt. Mansfield and

Willoughby Mountain and on the headlands of Lake Champlain are found the forms described by Porter as var. *monticola* (var. *Deanei*) var. *Randii* and var. *Redfieldii*.

- S. Virgaurea**, L. var. *alpina*, Bigel. Mansfield Chin ; Camel's Hump, *Brainerd*.

SONCHUS. SOW THISTLE

- S. ARVENSIS**, L. Creeping Sow Thistle. Shores and waste places of Champlain valley, becoming frequent ; Newfane, *Grout*.
S. ASPER, Vill. Waste places in rich soil ; frequent.
S. OLERACEUS, L. Waste places with the preceding.

TANACETUM. TANSY

- T. VULGARE**, L. Roadsides ; frequent.
T. VULGARE, L. var. *CRISPUM*, DC. With the species ; frequent.

TARAXACUM

- T. ERYTHROSPERMUM**, Andr. Red-seeded Dandelion. Shallow soil about ledges ; frequent. Possibly native.
T. OFFICINALE, Weber. (*T. Taraxacum*, Karst.) Dandelion. Common.

TRAGOPOGON

- T. PRATENSIS**, L. Goat's-beard. Waste places ; frequent.

TUSSILAGO

- T. FARFARA**, L. Coltsfoot. Moist clay banks and along mountain streams ; common.

XANTHIUM. COCKLEBUR

- X. Canadense**, Mill. Shores of lakes and rivers ; frequent.
X. Canadense, Mill. var. *echinatum*, Gray. Burlington and shores of Connecticut River, *Brainerd*.
X. STRUMARIUM, L. Banks of streams and waste places ; frequent.

STATISTICAL SUMMARIES

In the following summaries varieties and hybrids are counted with species. When, however, in Tables II and III the numbers are the same, precedence in the list is given to the family or genus containing the fewer varieties and hybrids. The summaries include the species recognized in the list of "Additions and Corrections."

I. NUMBERS AND SYSTEMATIC DISTRIBUTION OF SPECIES

	Native	Foreign	Total
Pteridophytes	81	0	81
Gymnosperms	15	0	15
Angiosperms			
Monocotyledons	441	33	474
Dicotyledons	793	200	993
Totals	1330	233	1563

II. DISTRIBUTION OF SPECIES AND VARIETIES AMONG THE PRINCIPAL FAMILIES OF ANGIOSPERMS

INCLUDING ALL HAVING 15 OR MORE SPECIES

MONOCOTYLEDONS. 15 FAMILIES. 111 GENERA

	Genera	Species and varieties		Total
		Native	Foreign	
Cyperaceæ	9	192	0	192
Gramineæ	44	101	29	130
Orchidaceæ	14	43	0	43
Liliaceæ	19	26	4	30
Naiadaceæ	4	29	0	29
Juncaceæ	2	19	0	19
The other nine families	19	31	0	31

DICOTYLEDONS. 85 FAMILIES. 362 GENERA

Compositæ	42	140	31	171
Rosaceæ	14	64	12	76
Leguminosæ	17	32	14	46
Labiatae	25	31	14	45
Cruciferae	18	25	16	41
Ericaceæ	16	39	0	39
Ranunculaceæ	11	31	4	35
Caryophyllaceæ	11	14	17	31
Polygonaceæ	3	21	10	31
Scrophulariaceæ	13	25	5	30
Salicaceæ	2	22	6	28
Cupuliferæ	8	26	0	26
Umbelliferae	16	16	5	21
Caprifoliaceæ	7	20	1	21
Rubiaceæ	4	16	3	19
Saxifragaceæ	6	16	0	16
Violaceæ	1	16	0	16
The other 68 families	148	239	62	301

III. THE PRINCIPAL GENERA OF ANGIOSPERMS

INCLUDING ALL HAVING TEN OR MORE SPECIES

MONOCOTYLEDONS

Genera	Species
<i>Carex</i>	135
<i>Potamogeton</i>	26
<i>Scirpus</i>	20
<i>Panicum</i>	19
<i>Juncus</i>	15
<i>Eleocharis</i>	15
<i>Habenaria</i>	12

DICOTYLEDONS

Genera	Species
<i>Aster</i>	39
<i>Solidago</i>	25
<i>Polygonum</i>	22
<i>Salix</i>	22
<i>Viola</i>	16
<i>Rubus</i>	16
<i>Galium</i>	15
<i>Ranunculus</i>	15
<i>Antennaria</i>	14
<i>Vaccinium</i>	11
<i>Quercus</i>	11
<i>Hypericum</i>	10

IV. THE NATIVE FLORA

It is often difficult to determine whether a plant is native or introduced. In the above summaries those plants are classified as "native," which are considered to be natives of northeastern America and which are, therefore, printed in full-face type in the catalogue, following the usage of the Gray Manual. This is not strictly correct, since a number of such plants have recently been added to the original flora of Vermont from the more immediately adjacent parts of this continent. Some of these like *Rudbeckia hirta* and *Hordeum jubatum* are clearly recognizable as introduced, while others like *Cenchrus tribuloides* and *Chenopodium capitatum* are apparently natives in some localities, although plainly not so in others.

The problem is further complicated by the fact that natural agencies other than man are operative in plant distribution. For example birds not only disseminate seeds locally, but at the migrating season they may carry them long distances. Probably some of our newly recognized forms of *Crataegus* have been brought from the South by migrating crows or other birds within recent years. Disregarding these more natural agencies we have attempted to select from among the species considered to be natives of this continent and, therefore, printed in full-face type in this catalogue, such as have in our judgment been introduced in Vermont by the direct or indirect agency of the white man. This list is doubtless incomplete and imperfect. In our judgment, however, the following plants, except where marked questionable, have been introduced in Vermont. Those followed by a question mark occur usually, if not always, as introduced plants, but it is possible that they may also occur occasionally as

natives. Thirty-seven names are included as unquestionably introduced. If these are deducted from the figures in the above summary it leaves as representing the more strictly native flora of the State 438 monocotyledons and 759 dicotyledons, which added to the Pteridophytes and Gymnosperms gives a revised total of 1293 native species, varieties and hybrida.

<i>Achillea Millefolium</i> , L. ?	<i>Monarda punctata</i> , L.
<i>Amarantus blitoides</i> , Wats.	<i>Oxalis stricta</i> , L.
<i>Amarantus graecizans</i> , L.	<i>Paspalum setaceum</i> , Michx. ?
<i>Ambrosia trifida</i> , L.	<i>Pentstemon lævigatus</i> , Solander.
<i>Arabis perfoliata</i> , Lam. ?	<i>Phlox paniculata</i> , L.
<i>Artemisia biennis</i> , Willd.	<i>Physalis heterophylla</i> , Nees.
<i>Aster multiflorus</i> , Ait. var. <i>exiguus</i> , Fernald.	<i>Physalis heterophylla</i> , Nees, var. <i>ambigua</i> , Rydberg.
<i>Atriplex patulum</i> , L.	<i>Physalis pruinosa</i> , L.
<i>Baptisia australis</i> , R. Br.	<i>Physalis Virginiana</i> , Mill.
<i>Cassia nictitans</i> , L. ?	<i>Plantago aristata</i> , Michx.
<i>Cenchrus tribuloides</i> , L. ?	<i>Plantago major</i> , L.
<i>Chenopodium capitatum</i> , Wats. ?	<i>Polygonum aviculare</i> , L. ?
<i>Chenopodium hybridum</i> , L. ?	<i>Polygonum erectum</i> , L.
<i>Cnicus pumilus</i> , Torr. ?	<i>Polygonum Hydropiper</i> , L.
<i>Crotalaria sagittalis</i> , L. ?	<i>Polygonum ramosissimum</i> , Michx. ?
<i>Eragrostis pectinacea</i> , Steud. ?	<i>Ranunculus repens</i> , L.
<i>Eragrostis Purshii</i> , Schrader.	<i>Robinia pseudacacia</i> , L.
<i>Erysimum cheiranthoides</i> , L. ?	<i>Robinia viscosa</i> , Vent.
<i>Euphorbia corollata</i> , L.	<i>Rudbeckia hirta</i> , L.
<i>Festuca ovina</i> , L.	<i>Sagina decumbens</i> , Torr and Gray. ?
<i>Helianthus annuus</i> , L.	<i>Sagina procumbens</i> , L. ?
<i>Helianthus tuberosus</i> , L.	<i>Silene antirrhina</i> , L. ?
<i>Heliopsis scabra</i> , Dunal. ?	<i>Spergularia rubra</i> , Presl.
<i>Hordeum jubatum</i> , L.	<i>Spiræa lobata</i> , Jacq.
<i>Humulus Lupulus</i> , L. ?	<i>Stachys palustris</i> , L.
<i>Krigia Virginica</i> , Willd. ?	<i>Symphoricarpos racemosus</i> , Michx.
<i>Lepidium apetalum</i> , Willd.	<i>Veronica peregrina</i> , L.
<i>Lepidium Virginicum</i> , L.	<i>Vicia Cracca</i> , L. ?
<i>Monarda fistulosa</i> , L. var. <i>rubra</i> , Gray	

SUPPLEMENTARY LISTS

LIST 1. The plants of the following list have been reported for Vermont, and in most cases there is a probability that they occur ; but we have been unable, after years of search and inquiry, to verify the report. We have, therefore, felt compelled to omit them from the present catalogue. But we would once more call the attention of all collectors in Vermont to the list, hoping that many of these plants may be rediscovered and reported with specimens.

The catalogues referred to are as follows :

James, Edwin. Catalogue of Plants of Middlebury, in Hall's Statistical Account of the Town of Middlebury, 1821.

Oakes, Wm. Catalogue of Vermont Plants, in Thompson's History of Vermont, 1852.

Torrey, Joseph. Catalogue of Vermont Plants. A continuation of the last in Appendix to the History of Vermont, 1853.

Perkins, G. H. Flora of Vermont in the Vermont Agricultural Reports of 1882 and 1888.

Jesup, H. G. Catalogue of the Plants of Hanover, N. H., 1891.

Asclepias purpurascens, L. Brattleboro, Frost ; Torrey's Catalogue.

Asclepias verticillata, L. Brattleboro, Frost ; Torrey's Catalogue.

Aster dumosus, L. var. *strictior*, Torr. & Gray. Oakes' Catalogue.

Aster elodes, Torr. & Gray. Brattleboro, Frost ; Torrey's Catalogue.

Aster patens, Ait. Barrows ; Perkins' Flora.

Calamagrostis Nuttalliana, Steud. Windsor, Leland ; Jesup's Flora.

Carex gynocrates, Worm. Burlington, Torrey ; Perkins' Flora.

Carex trichocarpa, Muhl. Burlington, Torrey ; Perkins' Flora.

Carex varia, Muhl. Bellows Falls, Carey ; Oakes' Catalogue.

Carex vestita, Willd. Middlebury, James ; Oakes' Catalogue.

Cimicifuga racemosa, Nutt. Middlebury, James ; Mt. Mansfield, Shelburne, Rock Point, Burlington, Macrae ; Oakes' Catalogue.

Crataegus tomentosa, L. Southern Vermont ; Perkins' Flora.

Crataegus tomentosa, L. var. *B.*, Torr. & Gray. Bellows Falls, Carey ; Oakes' Catalogue.

Desmodium canescens, DC. Pownal, Robbins ; Oakes' Catalogue.

Eragrostis capillaris, Nees. Bellows Falls, Carey ; Oakes' Catalogue.

Festuca tenella, Willd. Bellows Falls, Carey ; Oakes' Catalogue.

Festuca ovina, L. var. *duriuscula*, Koch ; Oakes' Catalogue.

Galeopsis Ladanum, L. Bellows Falls, Carey ; Oakes' Catalogue.

- Geranium Carolinianum*, L. Bellows Falls, Carey ; Oakes' Catalogue.
Glyceria obtusa, Trin. Bellows Falls, Carey ; Oakes' Catalogue.
Hieracium Gronovii, Tourn. Colchester, Torrey ; Brattleboro, Frost ; Torrey's Catalogue.
Hypoxis erecta, L. Brattleboro, Frost ; Torrey's Catalogue.
Isoetes Engelmannii, Braun. var. *gracilis*, Engelm. Frost ; Perkins' Flora.
Linum Virginianum, L. Pownal, Robbins ; Oakes' Catalogue.
Muhlenbergia sobolifera, Trin. Oakes' Catalogue.
Oxalis violacea, L. Cavendish, Dr. Graves ; N. Pomfret, A. P. Morgan ; Jesup's Flora.
Plantago Virginica, L. Brattleboro, Frost ; Torrey's Catalogue.
Poa trivialis, L. Perkins' Flora.
Podostemon ceratophyllus, Michx. Brattleboro, Frost ; Torrey's Catalogue.
Polygonella articulata, Meisn. Colchester Point, Pringle ; Perkins' Flora.
Potamogeton pulcher, Tuckerm. Brattleboro, Frost ; Torrey's Catalogue.
Pyrus arbutifolia, L. f. var. *erythrocarpa*. Oakes' Catalogue.
Quercus coccinea, Wang. Oakes' Catalogue.
Ranunculus sceleratus, L. Oakes' Catalogue.
Salix alba, L. Perkins' Flora.
Scleria triglomerata, Michx. Vermont ; Gray Manual and Britton & Brown Illustrated Flora.
Scirpus polyphyllus, Vahl. Pownal, Robbins ; Oakes' Catalogue.
Sisymbrium canescens, Nutt. Lake Champlain, Michaux ; Oakes' Catalogue.
Sisymbrium Thaliana, Gaud. A. Wood ; Torrey's Catalogue.
Smilax rotundifolia, L. Oakes' Catalogue.
Solidago odora, Ait. Oakes' Catalogue.
Trifolium procumbens, L. Perkins' Flora.
Urtica dioica, L. Oakes' Catalogue.
Viola pedata, L. Brattleboro, Frost ; Torrey's Catalogue.

LIST II. The following species have appeared in former lists of Vermont plants ; but are now omitted as they have proved to be mere waifs, or, if occasionally spontaneous, not persisting.

<i>Æsculus Hippocastanum</i> , L.	<i>Melissa officinalis</i> , L.
<i>Bromus hordaceus</i> , L.	<i>Myosotis arvensis</i> , Hoffm.
<i>Isatis tinctoria</i> , L.	<i>Oenothera laciniata</i> , Hill. ¹
<i>Ligustrum vulgare</i> , L.	<i>Papaver dubium</i> , L.
<i>Koeleria cristata</i> , Pers.	<i>Ribes aureum</i> , Pursh.
<i>Lycopus arvensis</i> , L.	<i>Veronica Virginica</i> , L.

¹ "Naturalized in Vermont" Britton Brown, Ill., Flora, II 487. This doubtless refers to plants collected at Fort Ethan Allen by Grout and Jones, in 1896, which were waifs.

LIST III. The following is a list of plants omitted from the present catalogue, although given in Perkins' Flora of Vermont, 1888 edition. Some of them are known to have been errors in determination, others represent specific names which have been suppressed in recent revisions, and the balance are so far out of their range that there is little doubt that they have been incorrectly assigned to the flora of the State.

Amarantus chlorostachys, Willd.
Anychia dichotoma, Michx.
Asclepias variegata, L.
Carex Crawei, Dewey.
Carex laxiflora, Lam. var. *intermedia*, Boott.
Carex rosea, Schkuhr. var. *retroflexa*, Torr.
Carex rostrata, With.
Carex striata, Michx.
Carex Shortiana, Dewey.
Carex tetanica, Schkuhr, var. *Meadii*, Bailey.
Cnicus horridulus, Pursh.
Clematis Viorna, L.
Cyperus setigerus, T. & H.
Desmodium rotundifolium, DC.
Draba verna, L.
Eleocharis rostellata, Torr.
Eriocaulon decangulare, Michx.
Gerardia purpurea, L.
Habenaria ciliaris R. Br.
Helianthus tracheliiifolius, Willd.
Hypericum mutilum L. var. *gymnanthemum*, Gray.
Juncus acuminatus, Michx. var. *debilis*, Engelm.
Leucothœ racemosa, Gray.
Lepidium ruderales, L.
Lycopus Europæus, L.
Myriophyllum heterophyllum, Michx.
Oenothera fruticosa, L.
Panicum amarum, Ell.
Pycnanthemum aristatum, Michx.
Pyrola rotundifolia, L. var. *incarnata*, DC.
Rumex aquatica, L.
Rumex sanguineus, L.
Sagittaria lancifolia, L.
Sagittaria natans, Michx.
Seriocarpus solidagineus, Nees.
Sisyrinchium albidum, Raf.

Solidago rigida, L.
Trifolium stoloniferum, Muhl.
Thaspium aureum, Nutt.
Thaspium trifoliatum, Gray.
Thaspium trifoliatum, Gray, var. *apterum*, Gray.
Tipularia discolor, Nutt.
Triodia cuprea, Jacq.
Viola striata, Ait.
Viola tricolor, L. var. *arvensis*, L.
Vitis cordifolia, Michx.
Vitis riparia, Engelm.

LIST IV. The following species have been found near the Vermont line and it is probable that they occur within the State :

Asclepias incarnata L. var. *pulchra*, Pers. Negro Island, Connecticut River, Hanover, N. H.
Aster Lindleyanus, Torr. & Gray. Wantastiquet Mountain, Hinsdale, N. H.
Aster Schreberi, Nees. "Abundant in the Connecticut River valley on the N. H. side." M. L. Fernald.
Calamintha Acinos, Benth. Within a few rods of the State line at Williamstown, Mass.
Myriophyllum verticillatum, L. Lebanon, N. H.
Rosa nitida, Willd. Enfield and New London, N. H.
Sisymbrium canescens, Nutt. Shore of Lake Champlain, N. Y.
Spiranthes simplex, Gray. Near Williamstown, Mass.
Stellaria longipes, Goldie. Claremont, N. H.; Williamstown, Mass.
Vaccinium stamineum, L. Greylock Mountain, Williamstown, Mass.
Verbena angustifolia, Michx. Hanover, N. H.
Xyris flexuosa, Muhl. var. *pusilla*, Gray, Plainfield, N. H.

LESSER FLORAS

The natural congregations among wild plants furnish most interesting problems to the botanist, and this interest deepens and the profit from the study grows when one seeks beyond the mere fact of the occurrence of certain plants in certain localities for the explanation of such occurrence. It was hoped when this catalogue was planned that some more adequate discussion of our flora might be given along these lines. Lack of space and time alike forbid that this plan be carried out in full. All that can now be attempted is the inclusion of the bare lists of a few of the more important of these lesser floras.

ALPINE

The following plants occur only, or principally, on the alpine summits of the Green Mountains, or in the higher mountain cliffs, as at Smuggler's Notch.

- | | |
|--|---|
| <i>Agrostis canina</i> , L. var. <i>alpina</i> ,
Oakes. | <i>Gentiana Amarella</i> , L. var. <i>acuta</i> ,
Hook. f. |
| <i>Arenaria Groenlandica</i> , Spreng. | <i>Hierochloe alpina</i> , R. & S. |
| <i>Arenaria verna</i> , L. var. <i>hirta</i> , Wats. | <i>Juncus trifidus</i> , L. |
| <i>Asplenium viride</i> , Hudson. | <i>Luzula spicata</i> , Desvaux. |
| <i>Betula papyrifera</i> , Marsh, var. <i>minor</i> ,
Tuckerm. | <i>Lycopodium annotinum</i> , L. var.
<i>pungens</i> , Spring. |
| <i>Carex atrata</i> , L. var. <i>ovata</i> , Boott. | <i>Lycopodium Selago</i> , L. |
| <i>Carex canescens</i> , L. var. <i>alpicola</i> ,
Wahl. | <i>Poa laxa</i> , Haenke. |
| <i>Carex rigida</i> , Gooden, var. <i>Bigelowii</i> ,
Tuckerm. | <i>Polygonum viviparum</i> , L. |
| <i>Carex scirpoidea</i> , Michx. | <i>Prenanthes Boottii</i> , Gray. |
| <i>Castilleja pallida</i> , Kunth. var. <i>septentrionalis</i> , Gray. | <i>Salix phylicifolia</i> , L. |
| <i>Comandra livida</i> , Richard. | <i>Salix Uva-ursi</i> , Pursh. |
| <i>Deschampsia atropurpurea</i> , Scheele. | <i>Scirpus cæspitosus</i> , L. |
| <i>Diapensia Lapponica</i> , L. | <i>Solidago Virgaurea</i> , L. var. <i>alpina</i> ,
Bigel. |
| <i>Empetrum nigrum</i> , L. | <i>Vaccinium Pennsylvanicum</i> , Lam.
var. <i>angustifolium</i> , Gray. |
| <i>Festuca brachyphylla</i> , Schultes. | <i>Vaccinium uliginosum</i> , L. |
| | <i>Vaccinium Vitis-Idæa</i> , L. |

SUB-ALPINE OR MONTANE

The following plants occur characteristically at high altitudes, and are rarely found below 1500 feet.

<i>Agropyron Novæ-Angliæ</i> , Scribn.	<i>Habenaria frimbriata</i> , R. Br.
<i>Alnus viridis</i> , DC.	<i>Habenaria obtusata</i> , Richards.
<i>Amelanchier oligocarpa</i> , Roem.	<i>Hedysarum boreale</i> , Nutt.
<i>Aspidium aculeatum</i> , Swartz. var. <i>Braunii</i> , Koch.	<i>Luzula spadicea</i> , DC. var. <i>melanocarpa</i> , Meyer.
<i>Aspidium fragrans</i> , Swartz.	<i>Lycopodium sabinæfolium</i> , Willd.
<i>Aspidium spinulosum</i> , Swartz, var. <i>dilitatum</i> , Hook.	<i>Myriophyllum Farwellii</i> , Morong
<i>Astragalus Blakei</i> , Eggleston.	<i>Pinguicula vulgaris</i> , L.
<i>Braya humilis</i> , Robinson.	<i>Potentilla tridentata</i> , Ait.
<i>Calamagrostis breviseta</i> , Scribn. var. <i>lacustris</i> , Kearney.	<i>Primula Mistassinica</i> , Michx.
<i>Calamagrostis hyperborea</i> , Lange.	<i>Pyrola minor</i> , L.
<i>Calamagrostis hyperborea</i> , Lange, var. <i>Americana</i> , Kearney.	<i>Pyrus sambucifolia</i> , C. & S.
<i>Calamagrostis inexpansa</i> , Gray.	<i>Ribes lacustre</i> , Poir.
<i>Calamagrostis Langsdorfii</i> , Trin.	<i>Ribes prostratum</i> , L'Her.
<i>Draba incana</i> , L.	<i>Salix balsamifera</i> , Barratt.
<i>Epilobium lineare</i> , Muhl. var. <i>oliganthum</i> , Trelease	<i>Saxifraga aizoides</i> , L.
<i>Galium Kamschaticum</i> , Steller.	<i>Saxifraga Aizoon</i> , Jacq.
<i>Gentiana linearis</i> , Froel.	<i>Saxifraga oppositifolia</i> , L.
<i>Geum macrophyllum</i> , Willd.	<i>Solidago macrophylla</i> , Pursh.
<i>Goodyera repens</i> , R. Br.	<i>Solidago Virgaurea</i> , L.
<i>Goodyera tessellata</i> , Ladd.	<i>Vaccinium cæspitosum</i> , Michx.
	<i>Viburnum pauciflorum</i> , Pylaie.
	<i>Woodsia glabella</i> , R. Br.
	<i>Woodsia hyperborea</i> , R. Br.

SAND-PLAIN

The following are characteristically sand-plain plants.

<i>Andropogon nutans</i> , L. var. <i>avenaceus</i> , Hack.	<i>Lespedeza capitata</i> , Michx.
<i>Asclepias obtusifolia</i> , Michx.	<i>Lupinus perennis</i> , L.
<i>Aster linariifolius</i> , L.	<i>Prunus cuneata</i> , Raf.
<i>Carex Houghtonii</i> , Torr.	<i>Pinus rigida</i> , Mill.
<i>Carex Muhlenbergii</i> , Schkuhr.	<i>Polygala polygama</i> , Walt.
<i>Carex siccata</i> , Dewey.	<i>Quercus ilicifolia</i> , Wang.
<i>Convolvulus spithameus</i> , L.	<i>Polygala sanguinea</i> , L.
<i>Fimbristylis capillaris</i> , Gray	<i>Salix humilis</i> , Marsh.
<i>Helianthemum majus</i> , B. S. P.	<i>Solidago puberula</i> , Nutt.
<i>Hieracium venosum</i> , L.	<i>Spiranthes gracilis</i> , Bigel.
	<i>Viola arenaria</i> , DC.

HEADLANDS OF LAKE CHAMPLAIN

Plants found on the rocky and exposed promontories of slate, limestone or red sand-rock. The cliffs and red sand-rock hills of the southern Champlain Valley more remote from the lake, like Buck Mountain and Snake Mountain, have a flora similar to these headlands.

- | | |
|---|--|
| <i>Arabis confinis</i> , Wats. | <i>Rhus Canadensis</i> , Marsh. |
| <i>Arenaria stricta</i> , Michx. | <i>Rosa acicularis</i> , Lindl. |
| <i>Aster ericoides</i> , L. var. <i>Pringlei</i> ,
Gray. | <i>Scutellaria parvula</i> , Michx. |
| <i>Corydalis aurea</i> , Willd. | <i>Shepherdia Canadensis</i> , Nutt. |
| <i>Draba incana</i> , L. var. <i>arabisans</i> ,
Wats. | <i>Solidago bicolor</i> , L. var. <i>concolor</i> ,
T. & G. |
| <i>Houstonia purpurea</i> , L. | <i>Solidago humilis</i> , L. |
| <i>Lathyrus ochroleucus</i> , Hook. | <i>Symphoricarpos racemosus</i> , Michx.
var. <i>pauciflorus</i> , Robbins. |
| <i>Pentstemon pubescens</i> , Soland. | <i>Trisetum subspicatum</i> , Beauv. |
| <i>Pimpinella integerrima</i> , Gray. | <i>Viburnum pubescens</i> , Pursh. |
| <i>Poa nemoralis</i> , L. | <i>Zygadenus elegans</i> , Pursh. |
| <i>Polygonum Douglasii</i> , Greene. | |

COLD SPHAGNUM BOGS

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| <i>Amelanchier Canadensis</i> , T. & G.
var. <i>oblongifolia</i> , T. & G. | <i>Drosera intermedia</i> , Hayne. |
| <i>Andromeda polifolia</i> , L. | <i>Eleocharis pauciflora</i> , Link. |
| <i>Arethusa bulbosa</i> , L. | <i>Epilobium strictum</i> , Muhl. |
| <i>Aster junceus</i> , Ait. | <i>Eriophorum alpinum</i> , L. |
| <i>Calopogon pulchellus</i> , R. Br. | <i>Eriophorum gracile</i> , Koch. |
| <i>Calypso borealis</i> , Salisb. | <i>Eriophorum gracile</i> , Koch, var. <i>pau-</i>
<i>cinervium</i> , Engelm. |
| <i>Carex chordorrhiza</i> , Ehrh. | <i>Eriophorum vaginatum</i> , L. |
| <i>Carex exilis</i> , Dewey. | <i>Geum rivale</i> , L. |
| <i>Carex folliculata</i> , L. | <i>Habenaria dilatata</i> , Gray. |
| <i>Carex fusca</i> , All. | <i>Kalmia glauca</i> , Ait. |
| <i>Carex livida</i> , Willd. | <i>Larix Americana</i> , Michx. |
| <i>Carex Magellanica</i> , Lam. | <i>Ledum Groelandicum</i> , Oeder. |
| <i>Carex oligosperma</i> , Michx. | <i>Listera cordata</i> , R. Br. |
| <i>Carex pauciflora</i> , Lightf. | <i>Lonicera caerulea</i> , L. |
| <i>Carex saltuensis</i> , Bailey. | <i>Lonicera oblongifolia</i> , Muhl. |
| <i>Carex tenella</i> , Schkuhr. | <i>Microstylis monophyllus</i> , Lindl. |
| <i>Carex tenuiflora</i> , Wahl. | <i>Orchis rotundifolia</i> , Pursh. |
| <i>Carex teretiuscula</i> , Gooden. | <i>Picea nigra</i> , Link. |
| <i>Carex trisperma</i> , Dewey. | <i>Poa pratensis</i> , L. var. <i>angustifolia</i> ,
Smith. |
| <i>Chiogenes serpyllifolia</i> , Salisb. | |

<i>Potentilla palustris</i> , Scop.	<i>Scirpus atrocinctus</i> , Fernald.
<i>Pyrola secunda</i> , L. var. <i>pumila</i> , Gray.	<i>Senecio Robbinsii</i> , Oakes.
<i>Pyrola rotundifolia</i> , L. var. <i>uliginosa</i> , Gray.	<i>Smilacina trifolia</i> , Desf.
<i>Salix candida</i> , Willd.	<i>Solidago neglecta</i> , T. & G.
<i>Rhamnus alnifolius</i> , L'Her.	<i>Solidago uliginosa</i> , Nutt.
<i>Salix myrtilloides</i> , L.	<i>Vaccinium macrocarpon</i> , Ait.
<i>Sarracenia purpurea</i> , L.	<i>Vaccinium Oxycoccus</i> , L.
	<i>Valeriana sylvatica</i> , Banks.
	<i>Viburnum cassinoides</i> , L.

ADDITIONS AND CORRECTIONS.

Page 5. *Juniperus communis*, L. var. According to Rehder, Cycl. of Am. Hort. 848, the common spreading juniper of New England pastures is var. *Canadensis*, Loud., while the var. *nana*, Loud. (*J. nana*, Willd.) is a plant of arctic and mountain regions, low and prostrate with shorter and broader leaves, $\frac{1}{4}$ – $\frac{1}{2}$ in. long.

Page 8. For *Alisma Plantago-aquatica*, L. read—*Alisma Plantago*, L. (Linnæus in Sp. Pl. 342, uses the latter name.)

Page 9. After *Agropyron Novae-Angliae*, add the following description, by Professor F. Lamson-Scribner :

Agropyron Novae-Angliae, Scribn. sp. nov. (*Triticum violaceum*, A. Gray, Man. ed. 5. 638. 1867, at least in part, not Hornem. Fl. Dan. t. 2044; *Agropyron violaceum*, var., S. Wats. in A. Gray, Man. ed. 6. 672. 1890, not *A. violaceum*, Lange, Consp. Fl. Groenland. 154. 1880; *A. violaceum virescens*, Lange, l. c. ?)—An erect caespitose perennial 6–10 dm. high, with rather long broad leaves and erect spikes 12–16 cm. long; culms smooth; sheaths striate, shorter than the internodes; ligule short; leafblades linear 20–25 cm. long, 4–10 mm. wide, long acuminate, narrowed at the base, striate, scabrous on the margins and nerves, sometimes glabrous, rarely with very few scattered hairs above, leaves of the innovations much smaller, narrow. Axis flattened, glabrous except on the ciliate-scabrous angles. Spikelets appressed, 14–16 mm. long, 3 to 5 flowered; rachilla rather densely hispid; empty glumes lanceolate, sub-equal, prominently 5 nerved, 12 mm. long, scabrous on the nerves and at the apex, bearing a short scabrous awn usually 2 mm. long; flowering glumes lanceolate, glabrous, 8–9 mm. long, rather faintly 3 to 5 nerved, short awn-pointed. Palea nearly equaling the glume, 2 nerved, scabrous on the margin, truncate or 2-toothed at the scabrous apex.

General distribution: Sandy shores, thickets, etc., Labrador and Newfoundland south to New York and Pennsylvania, west to Wisconsin and South Dakota, June to September.

Specimens examined: LABRADOR: Hamilton River, 6071, A. P. How, Aug. 17, 1894, ex. Herb. Geol. Surv. Canada. NEWFOUNDLAND: Middle Arm, 26, A. C. Waghorne, 1897; no locality, Waghorne, 1897. QUEBEC: sandy shore near Cacouna, C. G. Pringle, July 25, 1881. ONTARIO: Lake Nipigon, J. Macoun, July 17, 1884. MAINE: dry bank, Dead River, 576, M. L. Fernald, August 19, 1896. NEW HAMPSHIRE: White Mountains, C. E. Faxon, August 28, 1882; Oakes Gulf, Mt.

Washington, 1736, *W. W. Eggleston*, July 28, 1899; Corydon Mountain, *B. P. Ruggles*, July 20, 1892, 14, ex. Herb. Univ. Vermont. VERMONT: gravelly talus of cliffs, Willoughby Mountain, Westmore, *A. J. Grout* and *W. W. Eggleston*, July 2, 1894 (type). NEW YORK: in dry sandy soil, Ray Brook, Essex County, 8, *C. H. Peck*, August, 1897; Brownville, *C. H. Peck*, 1882. PENNSYLVANIA: Huntingdon County, *T. C. Porter*, July 1868, Sept. 10, 1860. WISCONSIN: Dalles, *F. F. Wood*, 1891. SOUTH DAKOTA: Sylvan Lake, 714, *David Griffiths*, August 27, 1897.

This species has been variously referred to *Agropyron tenerum* Vasey, *A. violaceum*, Lange, and *A. repens*, Beauv. From the latter it is distinguished at once by its caespitose habit, absence of a rootstock, leaves not auriculate at the base, strongly nerved outer glumes and peculiar hispid rachilla of the spikelets. From *A. violaceum* it is distinguished by its much longer and broader leaves, usually green, rarely purplish and longer spikes, and from *A. tenerum* by its much broader, less rigid leaves and hispid rachilla.

The plant described in Gray's Manual, ed. 6, 672. is the western form which is doubtless true *Agropyron violaceum*, Lange, while the variety mentioned "with longer usually pale narrow spikes and attenuate often long-awned glumes," is the plant here described as *Agropyron Novæ-Angliæ*.

Page 13. For *Glyceria fluitans*, R. Br., read—*Glyceria borealis*, Batchelder. This name, published in Proc. Manchester, (N. H.), Inst. 1:74, 106, is synonymous with var. *angustata*, Vasey, and *Panicularia borealis*, Nash.

Page 14. For *P. GLABRUM*, Gaudin, etc., read—*P. LINEARE*, Krock. (*P. glabrum*, Gaudin. *Syntherisma linearis*, Nash.)

Under *P. xanthophyllum*, form *amplifolium*, insert the following description by Professor F. Lamson-Scribner:

Panicum xanthophyllum forma *amplifolium*, Scribn. Culms stout; lower sheaths crowded, strongly striate and papillate-hirsute; blades firm, 10–20 mm. wide. Dry sandy soil, Burlington, Vt. L. R. Jones, collector, August 31, 1893.

Page 15. Eleventh line from top, for *P. psammophilum*, Scribn, read—*P. psammophilum*, Nash.

Professor Scribner has re-examined the Vermont specimens of the *Panicum dichotomum* group and the following additions and corrections to the statements made on page 15, are based upon notes contributed by him:

P. Atlanticum. Erase this name as the plant doubtfully so referred is a form of *P. unciphyllum*, Trin. See below.

P. dichotomum, Linn. These plants represent the var. *viride*, Vasey, a form considered as *P. dichotomum*, L. by common consent since they correspond more nearly than any other form to the original description of the species.

For **P. pubescens** read **P. unciphyllum**, Trin. This is one of the commonest species of this group. Professor Scribner sends the following statements as to the synonymy :

"*Panicum pubescens* of recent authors, not Lamarck. Recent examination of the type of this species in Lamarck's Herbarium, Museum de Historie Naturelle de Paris, proves it to be the late branched form of *Panicum scoparium*, Lam., which is entirely different from the form so considered by American authors and is *Panicum viscidum*, Ell. Synonymy: *Panicum scoparium*, Lam. Encycl 4:744, 1797. (*Panicum pubescens*, Lam. 1. c. 748; *Panicum viscidum*, Ell. Sk. Bot. S. C. and Ga. 1:123, 1817.) See Bull. 24, U. S. Dept. Agr. Div. Agros.

For the form previously referred to *Panicum pubescens* we have taken up the name *Panicum unciphyllum*, Trin. Gram. Pan. 242, 1826. Our reason for taking up this name is this—in the Herbarium of Columbia University is a specimen referable to the form here taken up as *P. unciphyllum*, labelled in Torrey's handwriting "*Panicum unciphyllum*, Trin. in lit." which was evidently named by Trinius and moreover the specimen agrees with Trinius' description. It is of course possible that this plant may not be the same as the type of *Panicum unciphyllum*, Trin., but we feel justified in taking up this old name for the species in question, rather than applying a new name to this very common grass."

P. sphaerocarpon, Ell. Erase this name. The plants collected on Sterling Mountain are a peculiar form of *P. boreale*, Nash.

P. tsugetorum, Nash. Erase this name. The plant so referred is *P. lanuginosum*, Ell. (*P. Tennesseense*, Ashe.) The record, "*Burlington, Jones*," should therefore be transferred to *P. lanuginosum*.

Page 18. Under **Carex folliculata**, L., insert—Sunderland, *Eggleston*.

Under **Carex formosa**, Dewey, erase—"Sunderland, *Eggleston*."

Page 26. Insert—**Juncus Dudleyi**, Wiegand. (Bull. Torr. Bot. Club, 27:524, 1900.) Pownal, *Eggleston* and *Churchill*; Willoughby, *G. G. Kennedy*, specimen in herbarium New Eng. Bot. Club.

Page 27. After **Luzula vernalis**, DC., insert as synonym—(*J. pilosum*, Kuntze).

For **LILUM** read **LILIUM**.

After *MAIANTHEMUM* insert as synonym—(*UNIFOLIUM*).

Page 30. Fourth line from top for "attitudes" read "altitudes."

After *LIPARIS* insert as synonym—(*LEPTORCHIS*).

Page 36. After *Polygonum Carey*, Olney, add—abundant at foot of Proctorsville Gulf, Cavendish, *M. L. Fernald*.

Fourth line from bottom, for *P. Convolvulus*, read *P. CONVOLVULUS*.

Page 39. After *Arenaria macrophylla*, Hook, insert as a synonym—(*Moehringia macrophylla*, Torr.).

Page 40. Fifth line from bottom, for *B. peltata*, etc., read *B. Schreberi*, Gmelin. (*B. peltata*, Pursh. *B. purpurea*, Casp.)

Page 46. Transfer "woods;" from end of second line to end of first line.

Page 53. After *S. salicifolia*, L. var. *latifolia*, for "Wiegand" read "Ait."

Page 54. Twelfth line from top, for *B. AUSTRALIS* read *B. australis*, and for "Ward" read "Wild."

Page 57. Fourth line from bottom, after *E. corallata*, insert—*L.*

Page 60. Fourth line from bottom, for *A. Ascyron*, read *H. Ascyron*.

Page 62. Tenth line from bottom, for *AEAGNACEAE*, read *ELAEAGNACEAE*.

Seventh line from bottom, for *LTHYRACEAE*, read *LYTHRACEAE*.

Page 68. Under *Rhododendron maximum*, for "Eggleston" read "Burbank."

Page 72. Add—*Hydrophyllum Canadense*, "Mt. Mansfield and south western Vermont," *Robbins*; Charlotte, *Pringle*. The latter's specimens were somewhat abnormal but were so named by Dr. Gray.

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